

# SUMMARY OF WATER-QUALITY DATA FOR CITY OF ALBUQUERQUE DRINKING-WATER SUPPLY WELLS, 1988-97

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#### CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
inch	25.4	millimeter
foot	0.3048	meter
mile	1.609	kilometer
gallon	3.785	liter
gallon per minute	0.06309	liter per second

Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) by the equation:

$$^{\circ}\text{F} = 9/5 (^{\circ}\text{C}) + 32$$

**Sea level:** In this report, “sea level” refers to the National Geodetic Vertical Datum of 1929—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

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## Abstract

The City of Albuquerque has collected and analyzed more than 5,000 water-quality samples from 113 water-supply wells in the Albuquerque area, including many drinking-water supply wells, since May of 1988. As a result, a large water-quality data base has been compiled that includes data for major ions, nutrients, trace elements, carbon, volatile organic compounds, radiological constituents, and bacteria. These data are intended to improve the understanding and management of the ground-water resources of the region, rather than demonstrate compliance with Federal and State drinking-water standards. This report gives summary statistics for selected physical properties and chemical constituents for ground water from wells used by the City of Albuquerque for drinking-water supply between 1988 and 1997. Maps are provided to show the general spatial distribution of selected parameters and water types around the region. Although the values of some parameters vary substantially across the city, median values for all parameters included in this report are less than their respective maximum contaminant levels in each drinking-water supply well. The dominant water types are sodium plus potassium / carbonate plus bicarbonate in the western part of the city and calcium / carbonate plus bicarbonate in the eastern part of the city.

## INTRODUCTION

Since May of 1988, the City of Albuquerque has collected and analyzed water-quality samples from a large number of water-supply wells in the Albuquerque area, most of which have been sampled on at least a biannual basis. This sampling effort has included 113 wells, 93 of which have been used for an extended period since 1988 as part of the drinking-water supply

to residents of the City of Albuquerque. The additional 20 wells have been used for a variety of other purposes, such as irrigation or dust control, or were taken out of service as drinking-water supply wells soon after 1988. Water-quality samples from all 113 water-supply wells have been analyzed for a variety of physical, chemical, and biological parameters, including major ions, nutrients, trace elements, carbon, volatile organic compounds, radiological constituents, and bacteria. As a result of this sampling effort, a large quantity of water-quality data has been accumulated in the Albuquerque area. The Water Utility Division of the City of Albuquerque Public Works Department currently maintains a data base of these water-quality data that is continuously updated as more samples are collected and analyzed.

The purpose of this ongoing sampling effort by the City of Albuquerque is to obtain information that can be used to improve the understanding and management of the ground-water resources of the region, rather than demonstrate compliance with government drinking-water regulations. In particular, the data that have been collected allow assessment of variation in water quality for individual wells, for different parts of the region, and for different depths within the aquifer. Such information can be used to determine how water quality is affected by individual sources of ground-water recharge, variation in aquifer lithologies, and overall water-table decline. Determination of these effects may play a role in decisions made by the City of Albuquerque and other regional water planners that relate to the location and design of new water-supply wells and to the quantity of water that is pumped in various areas. The data that have been collected through this effort also are useful to the residents of the City of Albuquerque in determining the quality of their municipal water supply in relation to drinking-water standards established by the U.S. Environmental Protection Agency (EPA), although this is not the primary purpose of the sampling program.

## Purpose and Scope

This report summarizes water-quality data collected by the City of Albuquerque from its drinking-water supply wells between May of 1988 and December of 1997. In particular, the report presents summary statistics on physical and chemical data for water from individual wells, provides maps showing the general spatial distribution of selected constituents around the region, and describes areal variations in water types. The physical and chemical data that are summarized in the report include properties determined in the field, dissolved solids, major ions, nutrients, trace elements, and organic carbon. Data are presented only for the 93 wells that have been used for drinking-water supply for the City of Albuquerque for a long enough period of time since 1988 to allow for the collection of more than 10 sets of water-quality samples. Data for wells that have been used strictly for purposes other than drinking-water supply, such as irrigation, are not included.

## Acknowledgments

The management of the City of Albuquerque Public Works Department--particularly within the Water Resources, Water Utility, and Wastewater Utility Divisions--should be recognized for initiating and continuing the extensive ground-water sampling program that has resulted in the creation of the current water-quality data base on the city's water-supply wells. The City of Albuquerque is not required by any regulatory authority to perform such a sampling program. The city's voluntary efforts provide an extensive body of data that is extremely useful in characterizing and managing the ground-water resources of the region. The authors thank the same management within the Public Works Department for providing the funding for this study of the water-quality data that have been collected. The authors also thank the numerous employees of the Water Utility and Wastewater Utility Divisions who have collected and analyzed the thousands of ground-water samples that make this study possible.

## Description of Study Area and Sampling Sites

The City of Albuquerque is located in the central part of New Mexico (fig. 1) and is the most populous

city in the State, with about 385,000 residents (U.S. Department of Commerce, 1993). Ground water pumped from wells owned and operated by the City of Albuquerque is the sole source of municipal water supply to the residents of the city. The number of drinking-water supply wells and the quantity of water pumped have increased dramatically during this century, from 10 wells capable of producing about 3,000 acre-feet (about 977 million gallons) per year in 1905 (Thorn and others, 1993) to more than 90 wells that produced about 35.8 billion gallons during calendar year 1997 (files of the City of Albuquerque). Currently (1998), the City of Albuquerque public water-supply system serves a total population of approximately 450,000 people, which includes residents both within the incorporated boundaries of the city and in surrounding parts of Bernalillo County. The system has more than 2,700 miles of water lines and more than 144,000 service connections (files of the City of Albuquerque).

The 93 drinking-water supply wells included in this report have been grouped by the City of Albuquerque into 25 well fields (fig. 1), mainly on the basis of the common collector line and reservoir each well supplies. Because the water from a number of different wells generally is combined in each reservoir, city residents typically receive water that is a mixture of water from several wells and often of water from more than one well field. Each of the 25 well fields includes 1 to 8 wells. Individual wells are identified by the name of the field to which they belong, followed by a single-digit number between 1 and the maximum number of wells in that field (for example, Thomas 4). The names of some of the city's drinking-water supply wells have changed over time; this report uses names that were current at the end of 1996.

The pumping schedules of the city's drinking-water supply wells differ for individual wells and for different seasons of the year. Pumping schedules for individual wells depend largely on the amount of pumpage that is required to maintain a sufficient water level in the individual reservoirs to which they are connected. Pumping schedules also depend on energy costs, which vary for different times of the day. Many of the drinking-water supply wells pump for as long as 12 hours a day through most of the year. During peak demand in the summer, the majority of drinking-water supply wells may be used, many of them pumping throughout most of the day. A few particular wells run constantly during the warmer months of the year. In 1997, the median combined daily pumpage from City

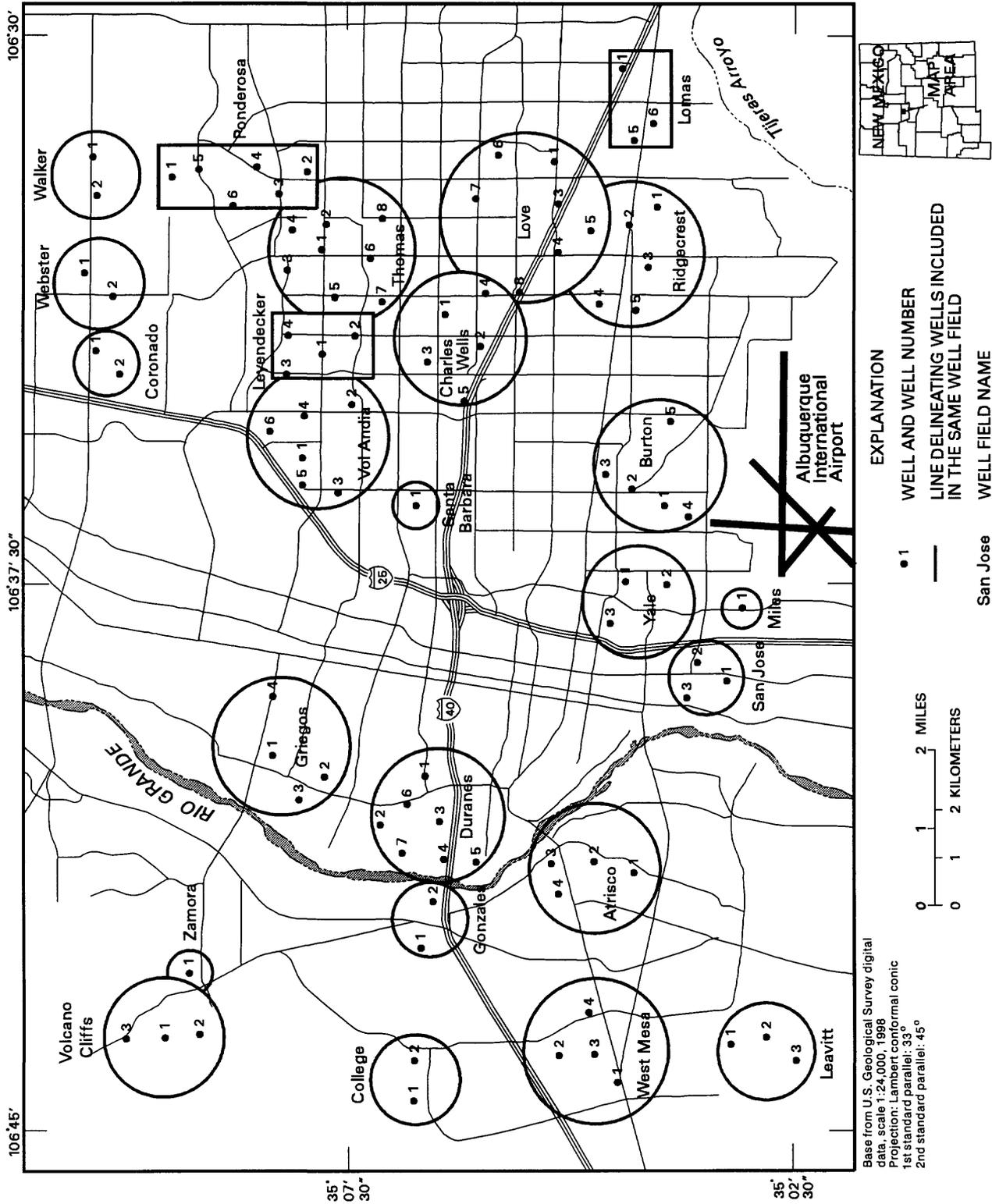


Figure 1. -- Locations of City of Albuquerque drinking -- water supply wells.

of Albuquerque drinking-water supply wells was about 91 million gallons. The smallest total amount of water pumped for any one day during 1997 was about 48 million gallons on December 12; the largest amount was about 179 million gallons on June 29. The dramatic increase in pumpage during the warmer months is due largely to water usage to irrigate landscaping and to run evaporative coolers. Some of the city's drinking-water supply wells have not contributed to the drinking-water supply during the entire time period of data covered in this report (1988-97) either because the wells were drilled after 1988 or because they were taken out of service before 1997. The years of data shown for each well in tables 1-93 (located at the back of this report) correspond closely to the years that those wells produced water for drinking-water supply, with the exception of College 1, which has not been used for drinking water since 1990, and Thomas 3, which was taken out of service in 1992.

Most of the City of Albuquerque's municipal drinking-water supply wells are constructed in a similar manner (fig. 2). Typical design includes blank casing between the land surface and the well screens, which generally begin about 75 to 275 feet below the water table. Blank surface and conductor casings also may be placed at the land surface. The annular space between the well casing and the aquifer generally is packed with gravel from the bottom of the well to about 100 feet above the screens. The annular space above this is filled with a relatively short interval of bentonite seal and then a longer interval of cement grout to the land surface. The cement grout provides a sanitary seal that prevents water of potentially poor quality from moving downward from the land surface along the well casing. The cased depths (blank casing plus well screens) of the 93 wells included in this report vary from about 500 to 1,786 feet below land surface; 80 of these wells are known to be at least 900 feet deep. The well casing generally is 16 or 18 inches in diameter and is made of steel. Although each well typically is screened over most of its saturated interval, the more permeable zones in the interval may provide most of the water to the well. The screened intervals in the wells range from less than 200 to more than 1,000 feet long and generally are more than 500 feet long. Static water levels at the time of well construction ranged from less than 10 to more than 800 feet below land surface. Because of the pumping of ground water for municipal supply, water levels in some wells have declined as much as 140 feet since 1960 (Thorn and

others, 1993). The majority of the city's drinking-water supply wells have vertical line shaft turbine pumps lubricated with either water or food-grade mineral oil, although six wells (Burton 2, Charles 5, Love 8, and Thomas 5-7) have submersible pumps.

All City of Albuquerque drinking-water supply wells are completed in the basin-fill deposits of the Santa Fe Group aquifer system. These deposits range from about 2,500 to 14,000 feet thick and consist primarily of unconsolidated to moderately consolidated sediments deposited within the past 25 million years (Hawley and Haase, 1992). The sediments include alternating and interfingering layers of gravel, sand, silt, and clay that were eroded from nearby mountains, transported from distant sources and deposited by river systems, or deposited on the floors of ancient playa lakes (Hawley and Haase, 1992). Volcanic rocks also are locally interbedded with these sediments.

## **METHODS**

### **Methods of Sampling**

Water samples from City of Albuquerque drinking-water supply wells are collected by personnel of the Water Quality Group within the Water Utility Division of the City's Public Works Department. Generally, the wells are pumped for at least 2 hours prior to sample collection to ensure that water from the well represents ambient water quality in the aquifer. Field measurements are made and samples are collected from taps at the wellheads upstream from any type of water treatment. Field measurements are made for specific conductance, pH, Eh, and water temperature using YSI 3500 Water Quality Monitors, which have been used by the Water Utility Division since September 1989. Field measurements prior to this time were made using less reliable meters for individual constituents. Water from the well is allowed to flow through the sample measurement chamber of the monitor, which is isolated from the atmosphere, for a minimum of 5 minutes to allow the sensors to equilibrate. After field measurements are made, the sample containers are filled directly from the tap. Although this sampling program is not intended to demonstrate compliance with Federal and State drinking-water regulations, samples are handled in accordance with these regulations. Because the

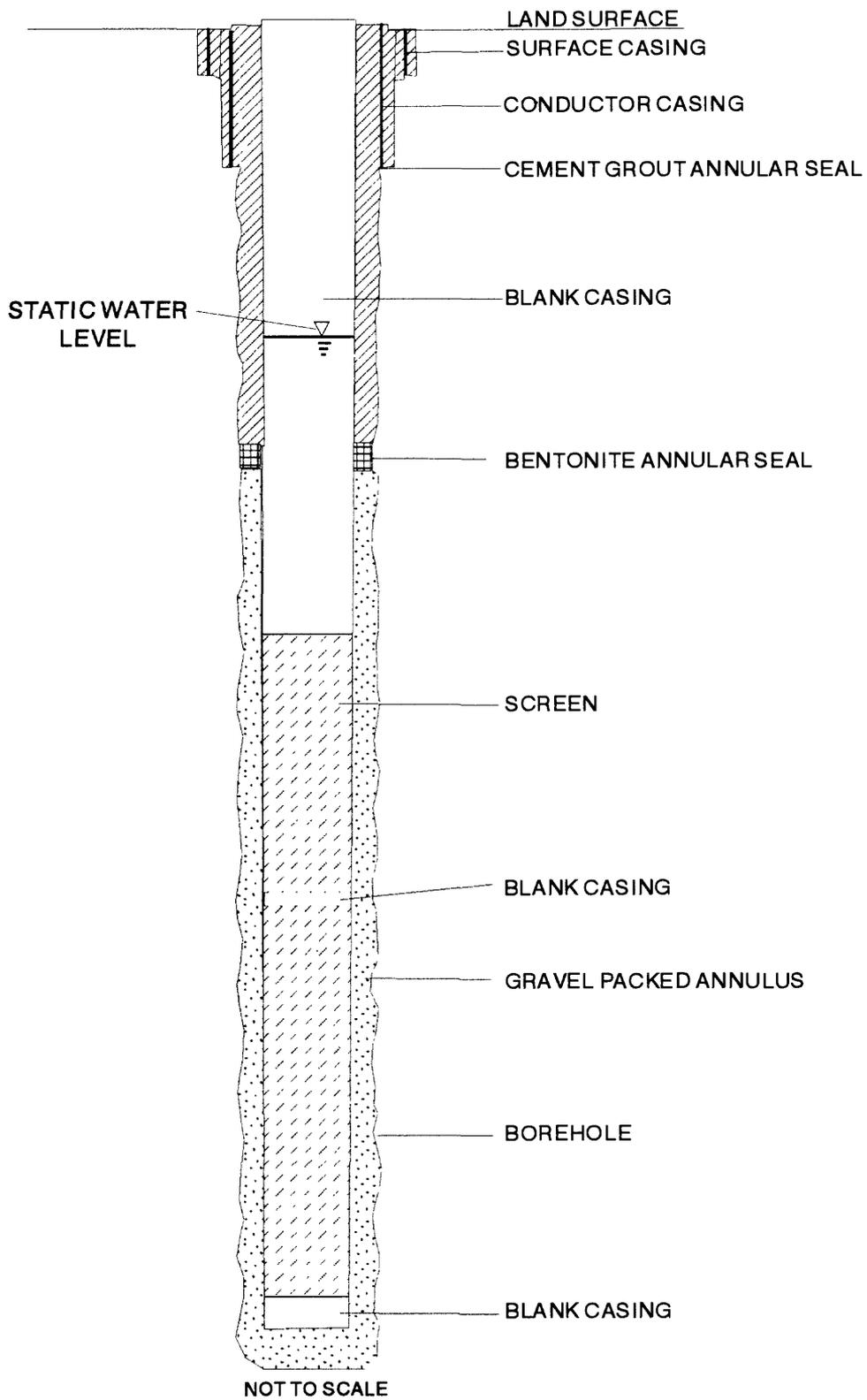


Figure 2.--Typical construction of a City of Albuquerque drinking-water supply well.

regulations are based on total concentrations, the samples are not filtered upon collection. Samples are collected and preserved according to EPA requirements (Kopp and McKee, 1983) and are transported on ice to the City of Albuquerque Water Quality Laboratory (WQL).

## Methods of Analysis

Laboratory analysis for each constituent is performed in accordance with EPA-approved methodology. The analytical methods used at the WQL follow those found in Standard Methods for the Examination of Water and Wastewater (American Public Health Association and others, 1985; 1989; 1992; and 1995) or those published by the EPA (Kopp and McKee, 1983). Because samples are unfiltered, results are reported as total concentrations, with the exception of dissolved solids. Results generally are given in milligrams per liter (mg/L) or micrograms per liter ( $\mu\text{g/L}$ ). Milligrams per liter are approximately equivalent to parts per million, and micrograms per liter are approximately equivalent to parts per billion (1,000 times smaller than mg/L). Hardness, alkalinity, calcium as calcium carbonate, bicarbonate, and carbonate are determined by titration in the laboratory. Concentrations of dissolved solids are determined in the laboratory by evaporation of water samples and weighing of residual solids. Concentrations of sulfate, chloride, bromide, nitrite, nitrate, and orthophosphate are determined using an ion chromatograph (IC). In early 1988, fluoride also was determined using an IC, but subsequent review revealed those results to be anomalously low. Therefore, fluoride results from early 1988 have been rejected and are not included in this report. Fluoride concentrations subsequent to early 1988 have been determined using an ion selective electrode method. Antimony, arsenic, lead, selenium, and thallium concentrations are determined using graphite furnace atomic absorption spectroscopy (GFAA). Cadmium and chromium concentrations were determined using direct aspiration atomic absorption spectroscopy (AAS) until 1992, when the EPA withdrew AAS as an approved method for these two elements (U.S. Environmental Protection Agency, 1991). Since 1993, cadmium and chromium concentrations have been determined using GFAA. Silica, aluminum, barium, beryllium, boron, lithium, strontium, molybdenum, and vanadium concentrations

were determined using nitrous oxide atomic absorption spectroscopy (N<sub>2</sub>O-AAS) until November 1989. At that time, the WQL began using an inductively coupled plasma-optical emission spectrophotometer (ICP-OES) method. Concentrations of cobalt, copper, iron, manganese, nickel, silver, and zinc are determined using AAS. Mercury was analyzed by cold vapor atomic absorption spectroscopy. Calcium, magnesium, sodium, and potassium concentrations were determined by N<sub>2</sub>O-AAS in 1988, IC in 1989, and ICP-OES since that technique became available. Total organic carbon was analyzed by the persulfate-ultraviolet oxidation method.

Concentrations of several trace elements often are below the current analytical method detection limit (MDL). These limits depend on the current performance of any instrumentation used as well as on the chosen analytical method. When not detected at or above the MDL, results are reported by the laboratory as "less than" the appropriate MDL. As a result of occasional instrument changes, changes in analytical methods, and periodic MDL reevaluations, the minimum reported level for several constituents changed between 1988 and 1997; for some constituents, the MDL's have changed several times.

The WQL is certified by the State of New Mexico and has a quality-assurance plan (Emory Moore, Water Quality Laboratory, oral commun., 1998). Sample containers and preservation reagents used are issued by the laboratory and are periodically checked for potential sources of contamination. The laboratory performs quality-control checks by analyzing second-source known standards, laboratory duplicates, laboratory fortified matrix (spiked) samples and duplicates, laboratory reagent blanks, and replicate samples. Samples analyzed by spectroscopic techniques are read in duplicate and the mean value is reported. Preparation of standards and dilution waters and other laboratory reagents are monitored and recorded.

## Data Processing for Statistics

The data base used for this investigation is a subset of the City of Albuquerque water-quality data base. This subset contains all water-quality information (except volatile organic compound data) collected from the City's drinking-water supply wells between May of 1988 and December of 1997. The data subset

consists of 151,100 individual observations, which represent 5,062 sampling events. Each individual observation consists of the result of an analysis for one individual water-quality parameter and information associated with that analysis. The associated information includes the well from which the sample was collected, the date and time of sample collection, the date and method of laboratory analysis, the initials of the sample collector and laboratory analyst, a laboratory remark code, and a user remark code. The laboratory remark code generally is used to indicate values that are less than the MDL. The user remark code allows for data to be checked and assigned a code that reflects the validity of particular results. Typically, data that are judged to be recorded incorrectly on field sheets (for example, grossly invalid numbers, such as zero for field pH) or are associated with known laboratory problems are flagged by personnel at the Water Quality Division with an "N" in the user remark code, indicating an invalid result.

Data that had been judged invalid ("N" in the user remark code) and data for wells and parameters not discussed in this report were removed from the data subset. Examples of parameters that were removed include all biological parameters, parameters that were analyzed by a method later judged to be inappropriate, parameters for which an analysis was performed no more than once per well, and parameters that were used to calculate other parameters (thereby merely duplicating information). All data were removed for those 20 wells that were not used for a substantial period of time between 1988 and 1997 as sources of drinking-water supply by the City of Albuquerque. Also removed were data associated with unusual sampling conditions (such as samples taken during well rehabilitation rather than during normal well operation) that were not believed to be representative of natural ground-water conditions in the aquifer.

After the elimination of invalid data and data not discussed in this report, additional modifications of the data subset were made relating to changes in laboratory methods and MDL's for particular parameters. For those parameters for which a reevaluation of the MDL (boron, iron, and total organic carbon) or a method change (aluminum and molybdenum) resulted in an increase in the MDL, all results reported as a detected value less than the new MDL were judged to be of generally questionable quality and were changed to appear as less than the new MDL. For those parameters for which a reevaluation of the MDL (nitrate, lithium)

or a method change (magnesium, potassium, beryllium, cadmium, chromium, lead, and vanadium) caused the MDL to decrease, results obtained with the old method were judged to be of generally lesser quality than results obtained with the new method. Therefore, data obtained using the old method were removed from the data subset. For magnesium, potassium, lead, lithium, and vanadium, the method changed in 1989, so a very limited number of results were removed for each well. For nitrate, beryllium, cadmium, and chromium, the method changed in 1993, so more results were removed.

Once modifications relating to MDL changes had been made to the data subset, summary statistics for each parameter were calculated by well. These statistics are presented along with basic well construction information for each well in tables 1-93. For brevity, four parameters (cobalt, mercury, molybdenum, and thallium) that were not detected at or above the MDL more than once in the entire body of data for that parameter are excluded from the tables.

The statistics presented in tables 1-93 include the minimum and maximum concentrations and the 10th, 25th, 50th, 75th, and 90th percentiles of the reported concentrations for each parameter. To calculate percentiles, all results reported for a given parameter are ordered from smallest to largest (ranked) and the  $X$ th percentile is chosen so that the value of that data point exceeds no more than  $X$  percent of the results and is exceeded by no more than  $100-X$  percent of the results. For example, the 50th percentile (or central value) is the data point at which no more than 50 percent of the results are exceeded and which is exceeded by no more than 50 percent of the results. The 50th percentile also is known as the median of a data set and provides a measure of the center of the data that is not affected by the magnitude of outliers (unusually large or small values). Another measure of the center of the data is the mean, or average, which is obtained by adding together all values reported for a given parameter, then dividing by the number of observations. Because the actual magnitudes of the observations are used in this calculation, the mean is more strongly influenced by outliers than the median is. For this reason, the median is known as a resistant, or nonparametric, statistic. The final statistic listed in tables 1-93, the standard deviation, is a measure of the spread of the data that incorporates the distance of each data point from the mean. The standard deviation is strongly affected by the magnitude of outliers. A

resistant measure of spread is the interquartile range, which is calculated by subtracting the value of the 25th percentile from that of the 75th percentile. The interquartile range is not shown in tables 1-93, but can be easily calculated from the statistics given. Table 94 provides selected summary statistics (minimum; 10th, 50th, and 90th percentiles; and maximum) that were calculated for each water-quality parameter using the median values for all wells.

To calculate statistics for water-quality parameters that included one or more results less than (<) the MDL (censored value), assigning a numerical value to these results was necessary. Therefore, all censored values in the data base were assigned the value of the MDL for that parameter (for example, <5 was assumed to be equal to 5) for the purposes of statistical calculations. Less-than symbols were then added back to the censored values for the nonparametric statistics presented in tables 1-93, given the known number of censored values reported for an individual parameter at a particular well. Because setting each censored value equal to its respective MDL does not allow for a realistic representation of the distribution of "actual" values less than the MDL, the statistics that are calculated using the actual magnitudes of the data (the mean and standard deviation) are always biased when censored values are included in the data set. Therefore, the mean presented in any of tables 1-93 for a parameter that includes values less than the MDL is biased high, and the standard deviation for the same parameter and well is biased low. The number of values less than the MDL for each parameter is indicated in the tables. The greater the number of values less than the MDL for a particular parameter, the greater the bias in the mean and standard deviation and the less confidence that should be placed in these two statistics. The percentiles also can be biased high when censored values are present if they had to be determined from the average of two results, one of which was a censored value.

## Methods of Defining Water Types and Compositions

Piper diagrams and Stiff diagrams provide graphic representations of the compositions of ground water with respect to major ions and allow for the visual comparison of compositions. Both diagrams use the concentrations of specific cations and anions in

milliequivalents per liter (meq/L), which are calculated from concentrations in mg/L as follows:

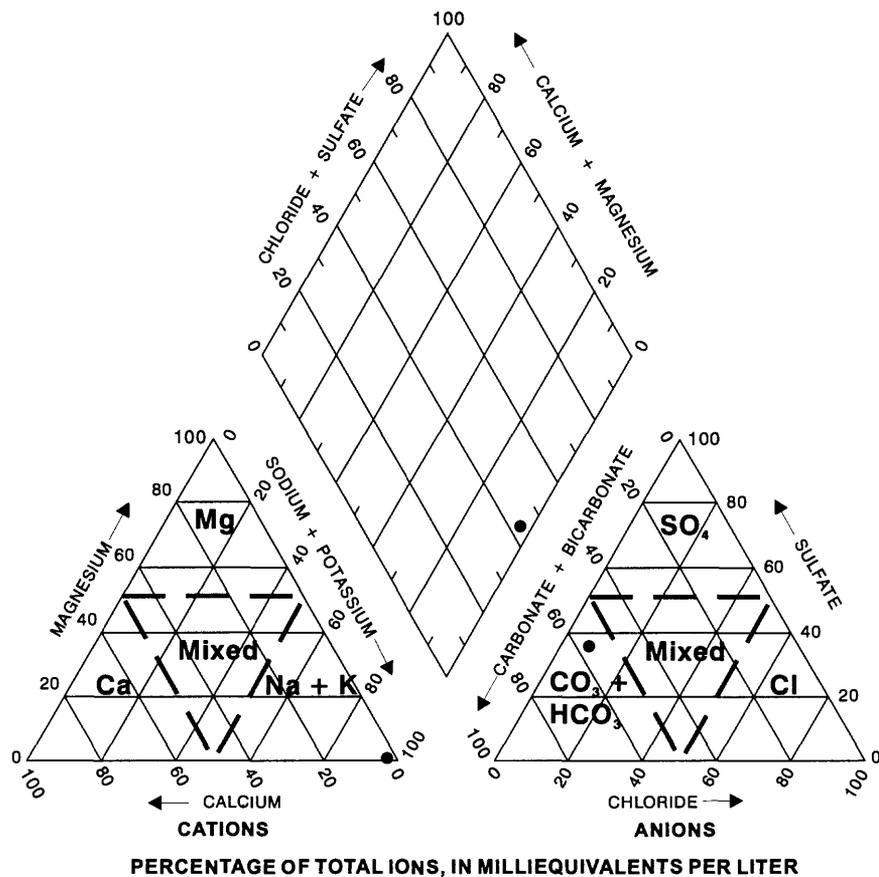
$$\text{concentration in meq/L} = \frac{\text{concentration of ion in mg/L} \times \text{valence of ion}}{\text{molecular weight of ion}} \quad (1)$$

Examples of these calculations and the resulting plots are shown in figure 3.

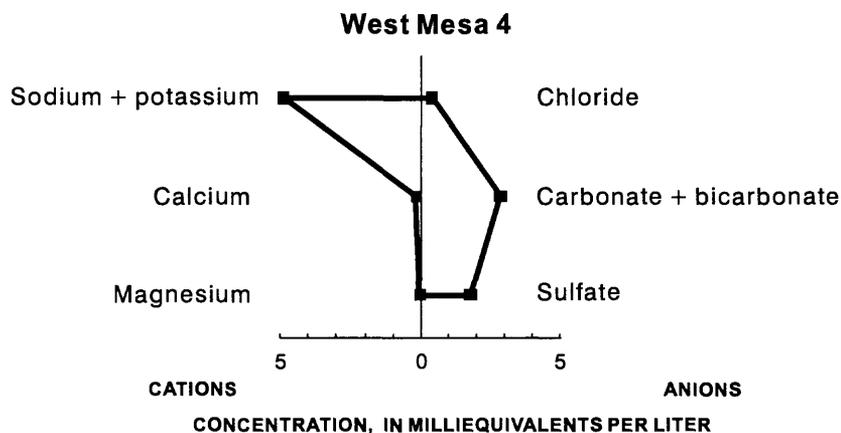
A Piper diagram (fig. 3A) uses three points to represent the composition of a single water sample. The point in the left triangle represents the concentration of each major cation or group of cations (sodium plus potassium, calcium, and magnesium) as a percentage of the total concentration of cations, in meq/L. The point in the right triangle represents the concentration of each major anion or group of anions (chloride, carbonate plus bicarbonate, and sulfate) as a percentage of the total concentration of anions, in meq/L. The points in each of these triangles are then projected into the diamond-shaped field to show the overall composition of the water with respect to both cations and anions. The left and right triangles can be divided into four areas that indicate the water type of the sample with respect to cations and anions, respectively. For example, the water sample shown in figure 3 is of a sodium plus potassium / carbonate plus bicarbonate type. One major advantage of a Piper diagram is the ability to represent and discern differences between the water types of a large number of samples on one diagram. One major disadvantage is that the diagram lacks a way to represent the magnitudes of the concentrations of cations and anions in a sample.

A Stiff diagram (fig. 3B) represents the composition of a single water sample using six points that are joined to form a distinctive shape. The left portion of the diagram shows the actual concentration of each major cation or group of cations, in meq/L, measured from the center line of the diagram. The right portion of the diagram shows the actual concentration of each major anion or group of anions in the same manner. A scale located at the bottom of the diagram allows determination of the actual concentrations shown. The shape formed by the Stiff diagram for one water sample can easily be compared with the shapes of other diagrams to discern differences in water composition. One disadvantage of Stiff diagrams is that the composition of only one sample can be illustrated on a single diagram.

(A)



(B)



(C)

DISSOLVED ION	CONCENTRATION (milligrams per liter)	CONCENTRATION (milliequivalents per liter)	PERCENTAGE OF TOTAL CATIONS OR ANIONS
Calcium	3.3	0.16	3.1
Magnesium	0.3	0.02	0.4
Sodium plus potassium	112.0 + 1.0	4.87 + 0.03 = 4.90	96.5
Chloride	14.8	0.42	8.4
Sulfate	87.0	1.81	36.1
Carbonate plus bicarbonate	9.7 + 130.1	0.19 + 2.60 = 2.79	55.6
Total cations = 5.08 milliequivalents per liter			
Total anions = 5.02 milliequivalents per liter			

Figure 3.--Examples of (A) Piper diagram showing water types, (B) Stiff diagram, and (C) calculations used to generate diagrams.

## SUMMARY OF WATER-QUALITY DATA

The water-quality data summarized in this report can be grouped into five general categories (tables 1-93): properties, dissolved solids and major ions, nutrients, trace elements, and carbon. Properties include characteristics of a water sample that must be measured in the field at the time of sampling because they are likely to change once the sample is subjected to conditions that differ from those existing in the aquifer. Properties also include some characteristics of a water sample that are determined in the field or laboratory through calculations or titrations (that is, through methods other than the direct measurement of the concentration of an individual parameter).

Dissolved solids is a measure of the concentration of all ions dissolved in solution. The other parameters listed under the heading of "Dissolved solids and major ions" in tables 1-93 are considered major ions because they include most inorganic parameters that typically are found in natural water at concentrations of at least 1 mg/L. The term "nutrient" can be broadly defined as any element that is needed by living things. However, for this report, the category of nutrients applies strictly to the various forms of the elements nitrogen and phosphorus. Trace elements are those elements that tend to be detected in water only at very small concentrations, typically less than 1 mg/L. The category of carbon as used in this report applies to organic forms of carbon.

Several of the parameters listed under the category of properties in tables 1-93 deserve further discussion to define the information that they provide about a water sample. Specific conductance is recorded in the field and measures the ability of a water sample to conduct electricity. A greater specific conductance generally indicates a greater concentration of ions in the water and thus a generally greater dissolved-solids concentration. The pH of a water sample is recorded both in the field and in the laboratory and is defined as the negative, base-10 logarithm of the activity of hydrogen ions, which is a function of (and in dilute solutions generally equivalent to) the concentration of hydrogen ions. A water sample with a pH of 7.0 is defined as neutral. A water sample with a pH less than 7.0 has a greater hydrogen ion activity and is referred to as acidic, whereas a water sample with a pH greater than 7.0 has a smaller hydrogen ion activity and is considered to be basic. The Eh of a water sample is

recorded in the field and is a measurement that reflects the oxidation conditions of the environment from which the sample was obtained. As the environment becomes more oxidizing, the measured Eh should increase. The hardness of a water sample is expressed in terms of an equivalent concentration of calcium carbonate and is measured in the laboratory by a titration. Hardness provides a general idea of how the water will react with soap; water with greater hardness tends to form more insoluble compounds with soap. Alkalinity is a measure of the ability of a water sample to neutralize acid and is determined by titrating the sample with a strong acid and measuring the changes in pH. Alkalinity is expressed in terms of an equivalent quantity of calcium carbonate and is produced mainly by dissolved carbonate and bicarbonate ions. As the concentration of carbonate and bicarbonate ions produced from dissolution of minerals in a water sample increases, so does the alkalinity. The Langelier saturation index (LSI) is a measure of the degree of supersaturation or undersaturation of a water sample with respect to calcium carbonate (Hem, 1985). The index is calculated by subtracting a theoretical calculated saturation pH from the measured pH of the water sample. As an example, a positive value of 1.0 for the index represents supersaturation of the sample by a factor of 10 (Hem, 1985) and a tendency for the water to deposit rather than dissolve calcium carbonate.

### Variation in Selected Parameters

The median concentrations by well for a majority of water-quality parameters in the data subset have been plotted on maps to show their variation across the Albuquerque area (figs. 4-29). The region shown in figures 4 through 29 is hereafter referred to as the study area. In general, the maps divide the results for each parameter into four categories that were determined using the 10th, 50th, and 90th percentiles of the median values for that parameter across all wells (table 94). The two categories for values greater than the 50th percentile of the median values for all wells are represented by large triangles pointing upward. In the following discussion, the median of the median concentrations of a certain parameter for all wells is referred to as the 50th percentile. The two categories for values smaller than the 50th percentile are represented by small triangles pointing downward.

The filled large and small triangles represent the most extreme values (values greater than the 90th percentile and less than the 10th percentile, respectively). For five parameters (chromium, iron, manganese, vanadium, and zinc), the 10th percentile equals the 50th percentile, so only three categories are shown on the maps and the small, filled triangles are eliminated. Parameters that were not plotted on maps include those for which more than 90 percent of the median values for all wells were less than the MDL (table 94) and those that essentially duplicated information provided by other parameters (specific conductance, laboratory pH, calcium as calcium carbonate, bicarbonate, and carbonate). Also not plotted are those parameters that were not included in the tables (cobalt, mercury, molybdenum, and thallium) because they were not detected at or above the MDL more than once in the entire body of data.

Variation of each parameter that has been plotted on a map is discussed below in the order that the parameters appear in tables 1-94. Parameters that have not been plotted are discussed briefly at the end of each section. The discussions include information on drinking-water standards set by the EPA and indicate whether the median value of a parameter for any well exceeds the standard set by the EPA for that parameter. The standards considered in this report include maximum contaminant levels (MCL's), which are health-based standards that are enforceable for all public water systems. Also considered are secondary maximum contaminant levels (SMCL's), which are nonenforceable standards that are based on aesthetics (such as how water looks, smells, and tastes) rather than on health effects. Table 95 lists the EPA standards for each parameter included in the report and shows the percentage of wells having a median value that exceeded each standard. Because water from each well typically is blended with water from other wells before delivery to customers, water received by customers does not exceed any MCL's and generally does not exceed any SMCL's, even if water from an individual well does.

## Properties

Median field pH values for water from City of Albuquerque drinking-water supply wells range from 7.34 to 9.00; the 50th percentile is 7.77. The median field pH values in water from 10 wells exceed the SMCL established by the EPA, which suggests that pH should range between 6.5 and 8.5. The 10 wells in

which water exceeds the standard are represented by the large filled triangles in figure 4. These wells are located west of the Rio Grande toward the southern part of the study area, in the College, West Mesa, Leavitt, and Atrisco well fields (fig. 1). All but one of the wells west of the Rio Grande have median field pH values greater than the 50th percentile for all wells. Median field pH values show no particular pattern east of the Rio Grande, except for a continuous band of pH values in the northeast that are less than the 50th percentile.

Median Eh values for water range from 85 to 197 millivolts; the 50th percentile is 168 millivolts. The values in water from wells around the study area show no particular spatial pattern (fig. 5), although values in the southwest and the far northeast typically are less than the 50th percentile. The median Eh values in all wells are greater than zero, which implies that ground-water environments around City wells generally are oxidizing at the depths where the wells are screened. The EPA has no standard for Eh.

Median water temperatures in the City's drinking-water supply wells range from 16.7 to 33.4 degrees Celsius; the 50th percentile is 22.6 degrees. Water temperatures are warmest in wells along the far western and eastern edges of the study area and just north and west of Albuquerque International Airport (fig. 6). A cluster of wells with the coldest water temperatures is located just east of Interstate 25 in the north-central part of the city. The EPA has no standard for water temperature.

Median hardness in water ranges from 9 to 229 mg/L as calcium carbonate; the 50th percentile is 114 mg/L. Wells in which median hardness values are less than the 10th percentile are clustered west of the Rio Grande toward the southern part of the study area (fig. 7). Hardness generally is less than the 50th percentile west of the river. The greatest values of hardness are in water from wells scattered throughout the eastern part of the study area, but many fall in a continuous band in the northeast. Qualifying terms such as "soft" or "very hard" often have been applied to hardness, depending on its magnitude. One such classification scheme (Hem, 1985) describes water having a hardness between 0 and 60 mg/L as calcium carbonate as soft, between 61 and 120 mg/L as moderately hard, between 121 and 180 mg/L as hard, and more than 180 mg/L as very hard. According to these categories, water from City drinking-water wells ranges from soft in several wells in the southwest to hard in many wells east of the Rio Grande and very hard in fewer than 10 scattered wells. The EPA has no standard for hardness.

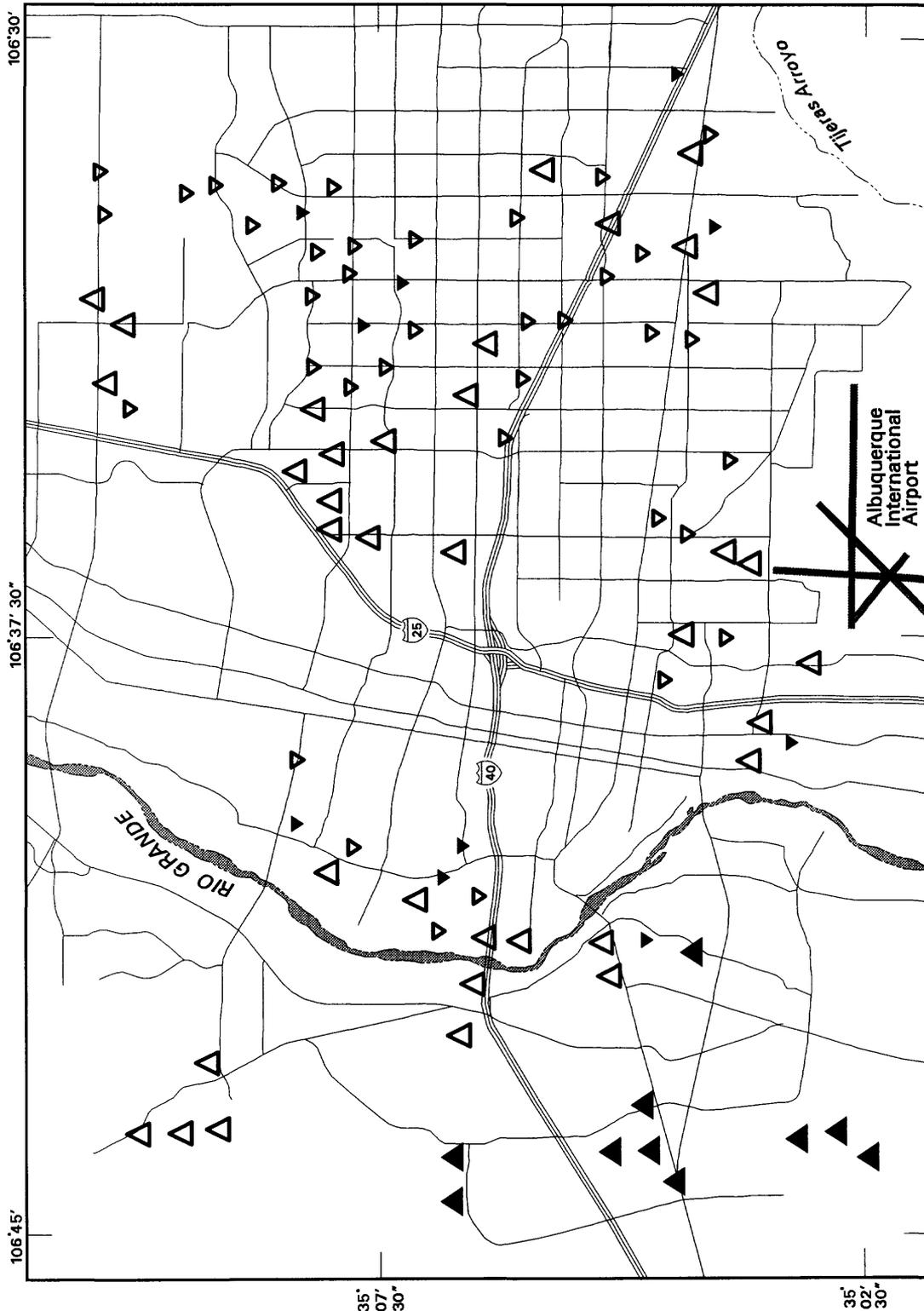


Figure 4. -- Median field pH values in City of Albuquerque drinking -- water supply wells.

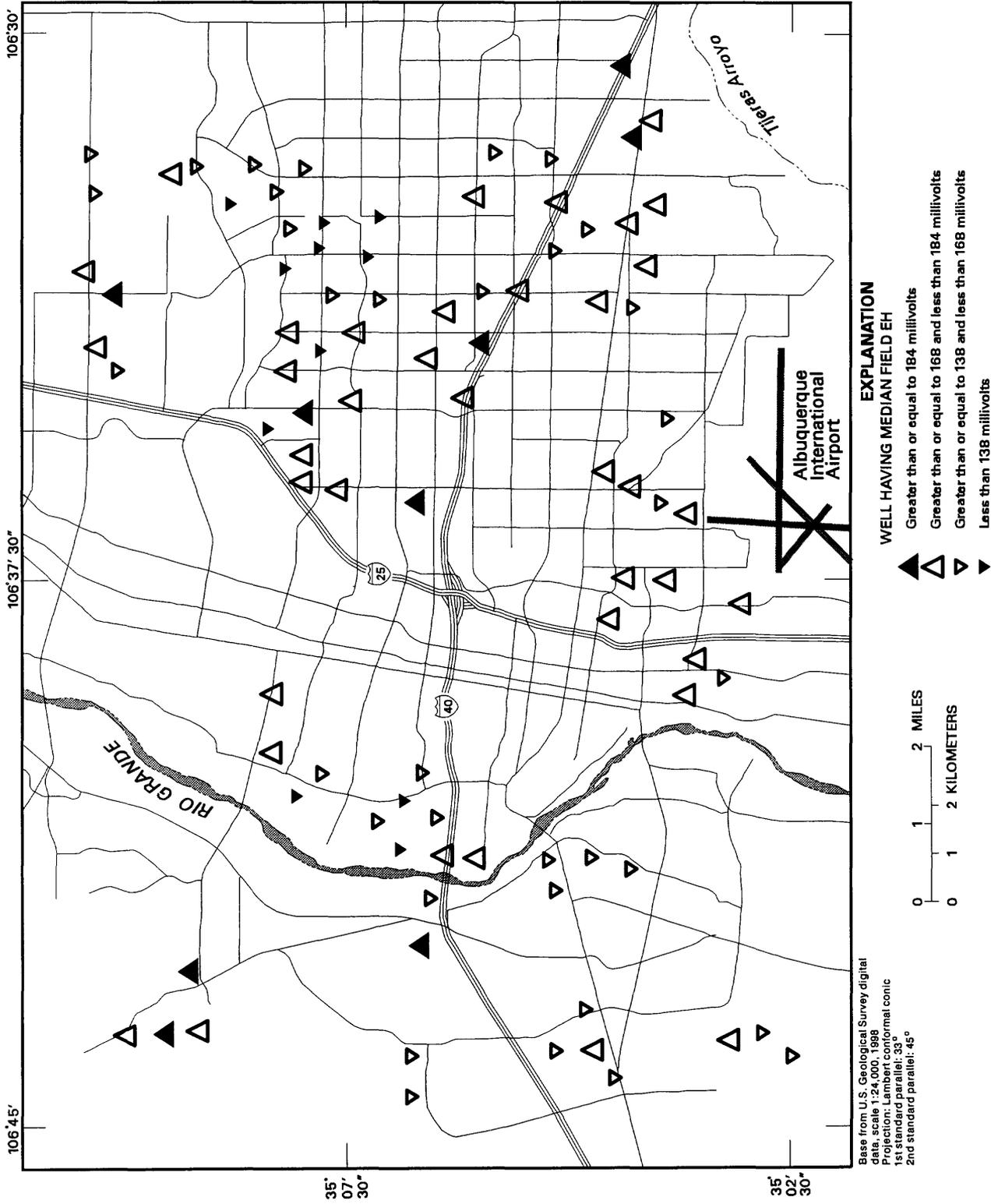
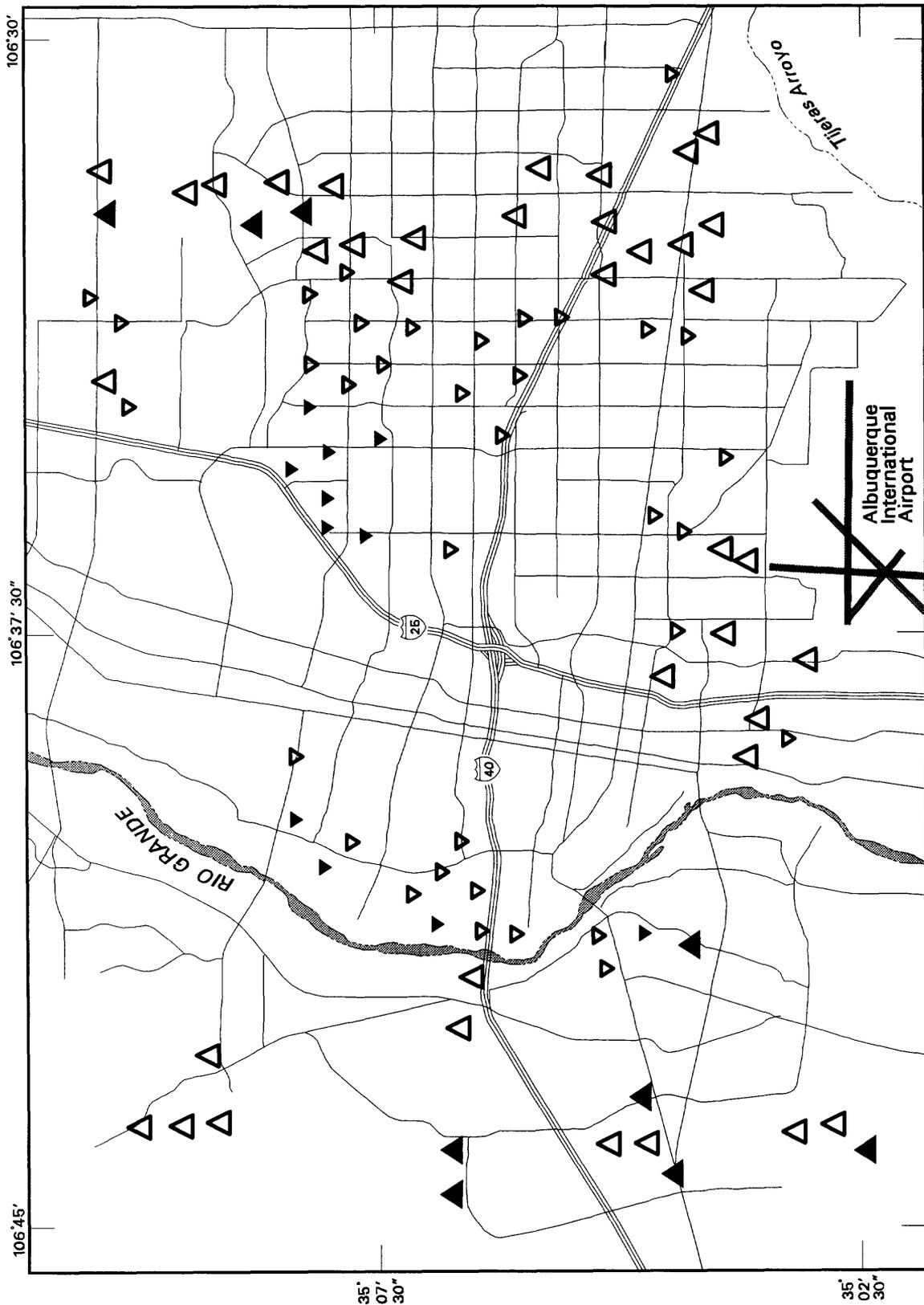


Figure 5. — Median field Eh values in City of Albuquerque drinking — water supply wells.



Base from U.S. Geological Survey digital data, scale 1:24,000, 1998  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°

**EXPLANATION**

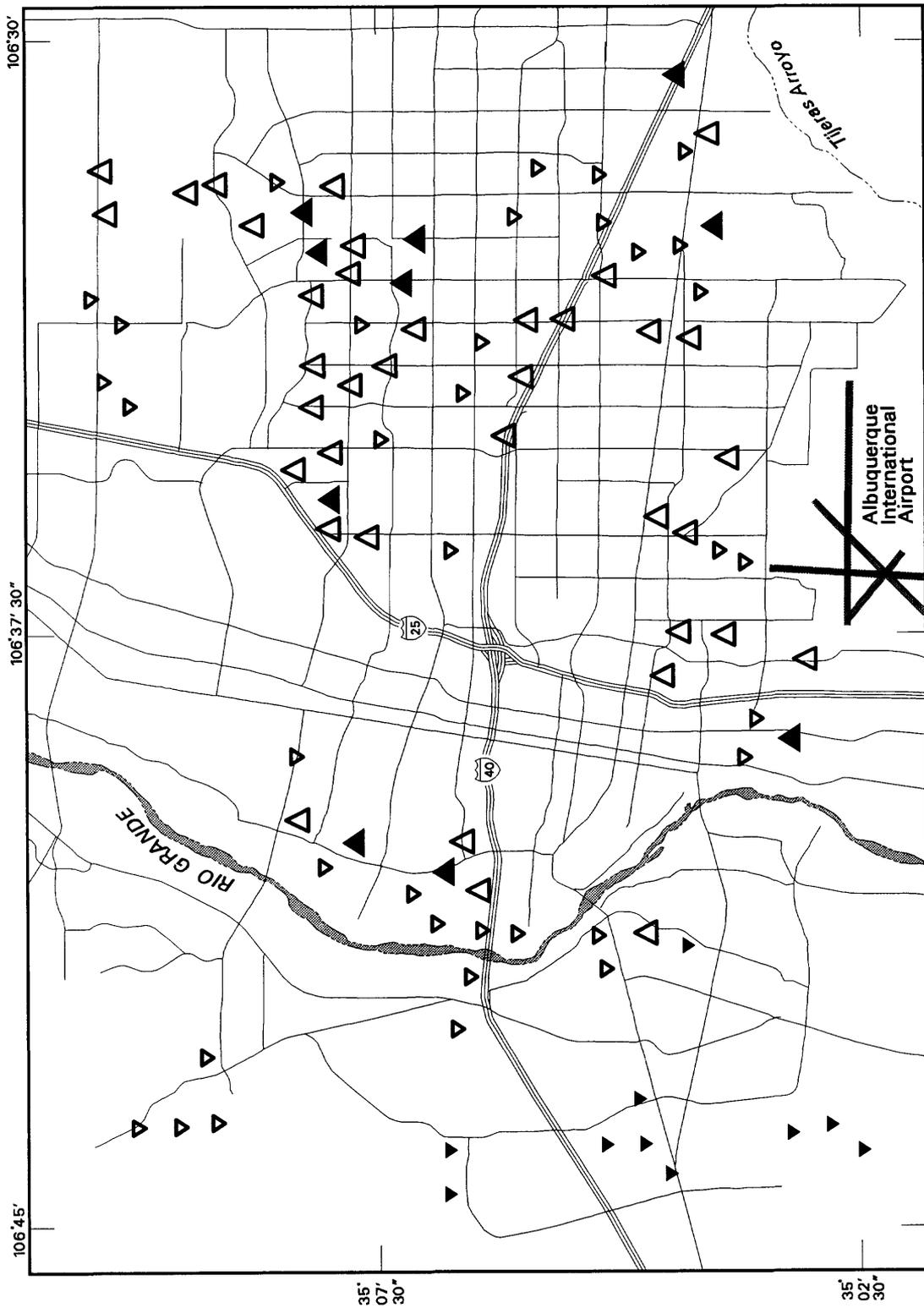
**WELL HAVING MEDIAN WATER TEMPERATURE**

- ▲ Greater than or equal to 26.9 degrees Celsius
- △ Greater than or equal to 22.6 and less than 26.9 degrees Celsius
- ▽ Greater than or equal to 18.3 and less than 22.6 degrees Celsius
- ▼ Less than 18.3 degrees Celsius

Categories based on 10th, 50th, and 90th percentiles of median temperatures for all wells



**Figure 6. -- Median water temperatures in City of Albuquerque drinking -- water supply wells.**



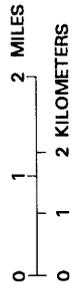
Base from U.S. Geological Survey digital data, scale 1:24,000, 1998  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°

**EXPLANATION**

**WELL HAVING MEDIAN HARDNESS**

- ▲ Greater than or equal to 157 milligrams/liter as calcium carbonate
- △ Greater than or equal to 114 and less than 157 milligrams/liter as calcium carbonate
- ▽ Greater than or equal to 27.4 and less than 114 milligrams/liter as calcium carbonate
- ▼ Less than 27.4 milligrams/liter as calcium carbonate

Categories based on 10th, 50th, and 90th percentiles of median hardness values for all wells



**Figure 7. -- Median hardness concentrations in City of Albuquerque drinking -- water supply wells.**

Median alkalinity values in water range from 99.9 to 168 mg/L as calcium carbonate; the 50th percentile is 122 mg/L. Water from most wells west of Interstate 25 has median alkalinity values larger than the 50th percentile (fig. 8). Another band of relatively large alkalinity values is in wells in the northeast part of the study area. Alkalinity values less than the 50th percentile are in wells scattered throughout the eastern part of the study area. The EPA has no standard for alkalinity.

Median LSI values for water range from -0.18 to 0.5; the 50th percentile is 0.01. All but one of the wells with the largest LSI values are located west of the Rio Grande toward the south (fig. 9). In general, LSI values greater than the 50th percentile are in water from wells scattered around the study area, with a relatively large cluster in the northeast. LSI values less than the 10th percentile are scattered, but are mainly in wells east of the Rio Grande. The EPA has no standard for LSI.

Median field conductance and median laboratory pH values in water samples were not plotted on maps because they duplicate information provided by median dissolved solids and median field pH, respectively. Median field conductance varies from 260 to 695 microsiemens per centimeter at 25 degrees Celsius; the 50th percentile is 420 microsiemens per centimeter. Median laboratory pH ranges from 7.61 to 9.11; the 50th percentile is 7.94.

## **Dissolved Solids and Major Ions**

Median dissolved-solids concentrations in water range from 168 to 440 mg/L; the 50th percentile is 287 mg/L. The largest dissolved-solids concentrations generally are in wells west of Interstate 25, although some concentrations greater than the 50th percentile are in wells in the far northeast and just north and west of Albuquerque International Airport (fig. 10). The lowest values generally are in water from wells scattered throughout the north-central and southeastern parts of the study area. None of the median dissolved-solids concentrations exceed the SMCL of 500 mg/L.

Median calcium concentrations in water range from 1.92 to 75.9 mg/L; the 50th percentile is 39.2 mg/L. Wells with concentrations less than the 10th percentile are all clustered along the western edge of the study area toward the south (fig. 11). The largest concentrations generally are in wells east of Interstate 25, with a cluster of concentrations greater than the 90th percentile in the northeast. The EPA has no standard for calcium.

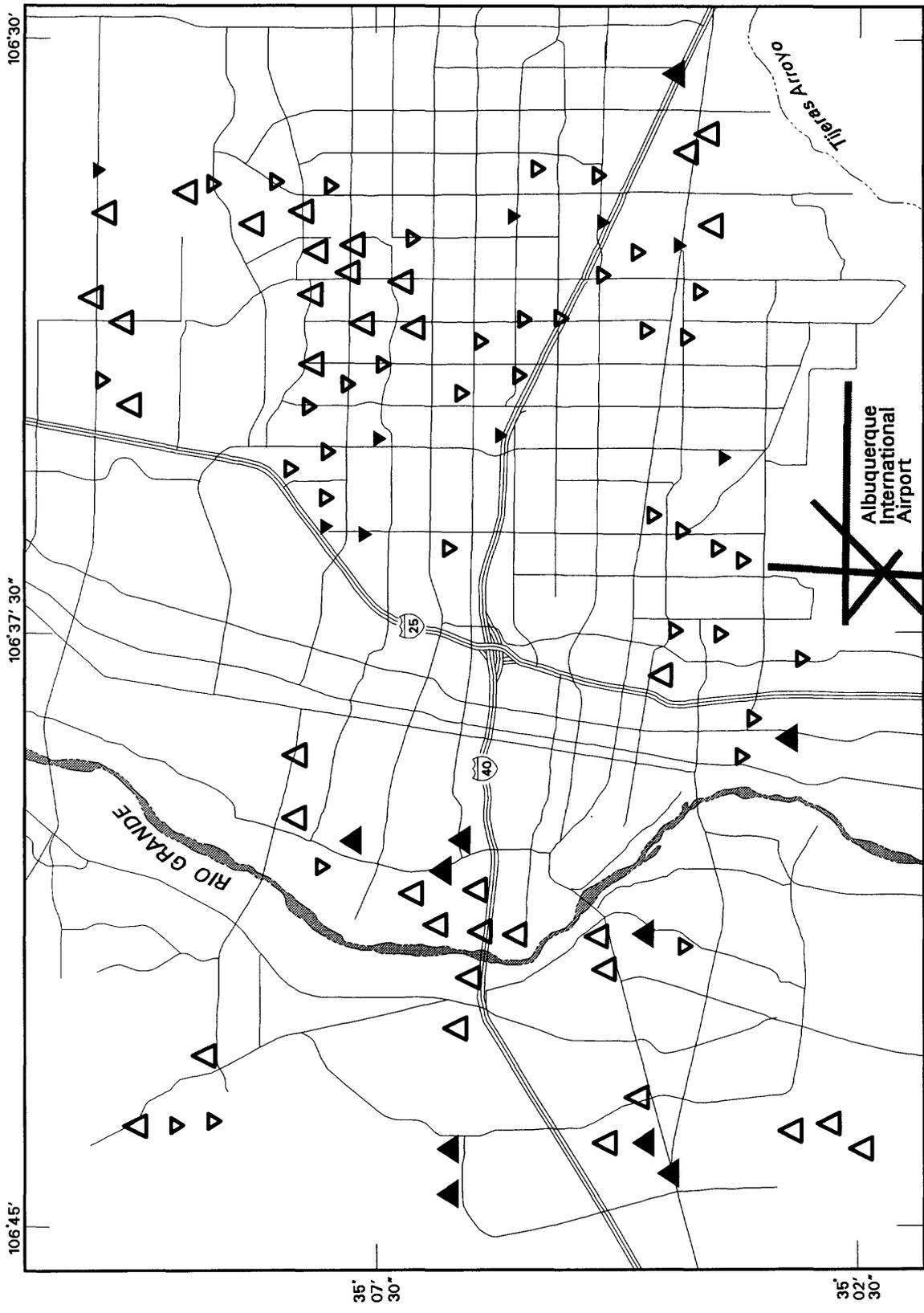
Median magnesium concentrations in water range from 0.09 to 13.4 mg/L; the 50th percentile is 4.50 mg/L. All but one of the wells in which concentrations are less than the 10th percentile are clustered along the western edge of the study area toward the south (fig. 12). Many of the larger magnesium concentrations are in wells in the central part of the study area, although a few values greater than the 50th percentile cluster in the south and southeast and along the northern edge of the study area. The EPA has no standard for magnesium.

Median sodium concentrations in water range from 16.9 to 140 mg/L; the 50th percentile is 39.1 mg/L. All wells in which concentrations are greater than the 90th percentile are west of the Rio Grande toward the south (fig. 13). Except for a cluster of relatively large concentrations in the far northeast, most concentrations greater than the 50th percentile are in wells west of Interstate 25. All wells in which concentrations are less than the 10th percentile are located just east of Interstate 25 in the central part of the study area. The EPA has no standard for sodium.

Median potassium concentrations in water range from less than 1 to 9.65 mg/L; the 50th percentile is 2.87. All wells in which concentrations are less than the 10th percentile are located west of the Rio Grande toward the south (fig. 14). Concentrations greater than the 50th percentile tend to be in a band of wells that runs from the northwest to the south-central part of the study area. A few relatively large concentrations are in wells in the far northeast part of the study area. The EPA has no standard for potassium.

Median sulfate concentrations in water range from 16.8 to 133 mg/L; the 50th percentile is 38.1 mg/L. Most of the largest sulfate concentrations are in wells along or west of Interstate 25 (fig. 15). Concentrations less than the 10th percentile generally are in wells along the eastern edge of the study area. None of the median sulfate concentrations exceed the SMCL of 250 mg/L.

Median chloride concentrations in water range from 4.79 to 90.2 mg/L; the 50th percentile is 17.5 mg/L. Most concentrations greater than the 50th percentile are in wells along the southern and eastern edges of the study area (fig. 16). Concentrations greater than the 90th percentile are in wells in the northeast. Concentrations less than the 10th percentile are in wells scattered mainly in the southeast and along the western edge of the study area. None of the median chloride concentrations exceed the SMCL of 250 mg/L.

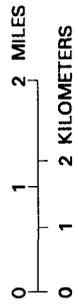


Base from U.S. Geological Survey digital  
 data, scale 1:24,000, 1998  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°

**EXPLANATION**

**WELL HAVING MEDIAN ALKALINITY**

- ▲ Greater than or equal to 152 milligrams/liter as calcium carbonate
- △ Greater than or equal to 122 and less than 152 milligrams/liter as calcium carbonate
- ▽ Greater than or equal to 107 and less than 122 milligrams/liter as calcium carbonate
- ▼ Less than 107 milligrams/liter as calcium carbonate



Categories based on 10th, 50th, and 90th percentiles of median alkalinities for all wells

**Figure 8. -- Median alkalinity values in City of Albuquerque drinking -- water supply wells.**

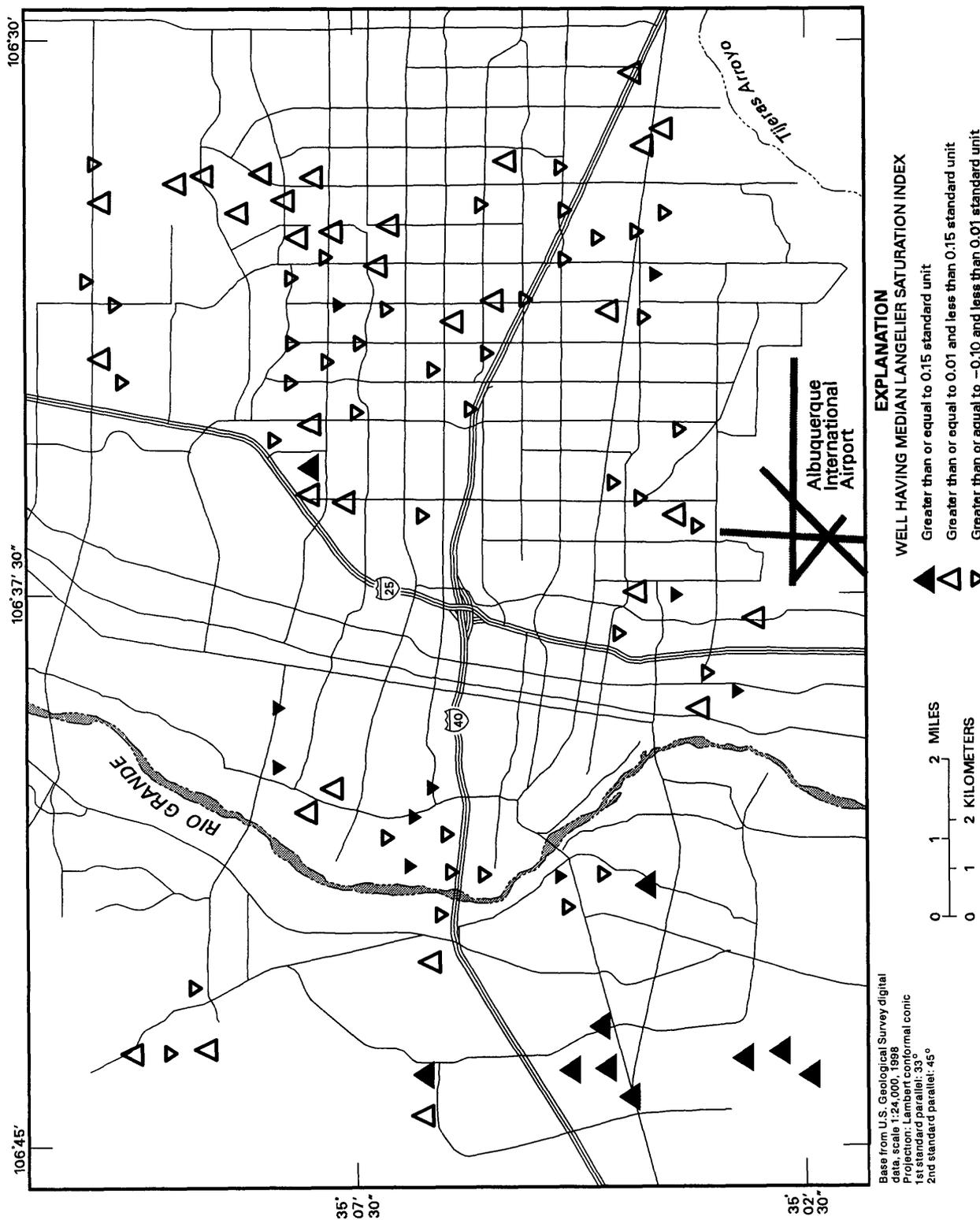
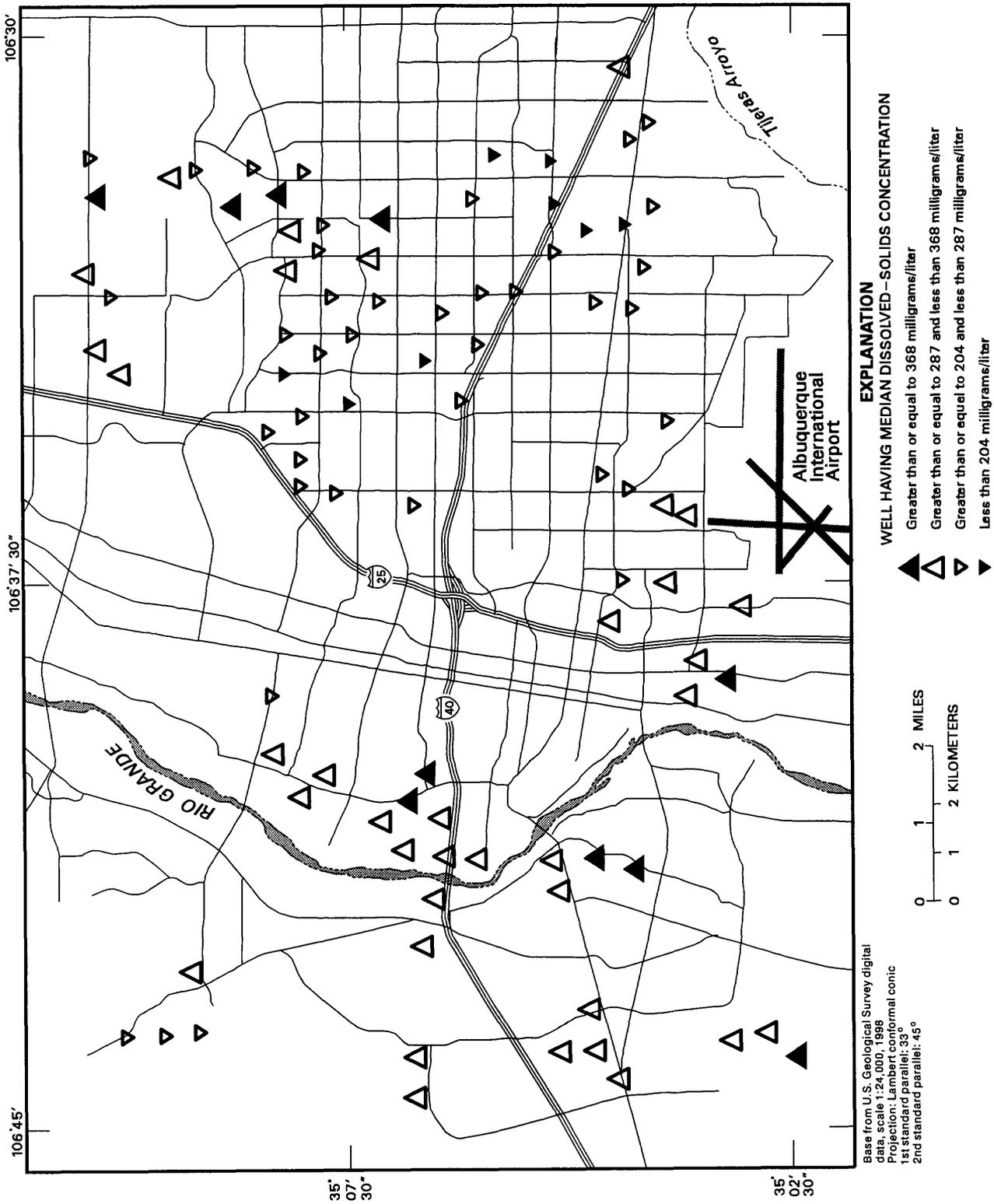


Figure 9. -- Median Langelier saturation indices in City of Albuquerque drinking -- water supply wells.



Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells

Figure 10. — Median dissolved — solids concentrations in City of Albuquerque drinking — water supply wells.

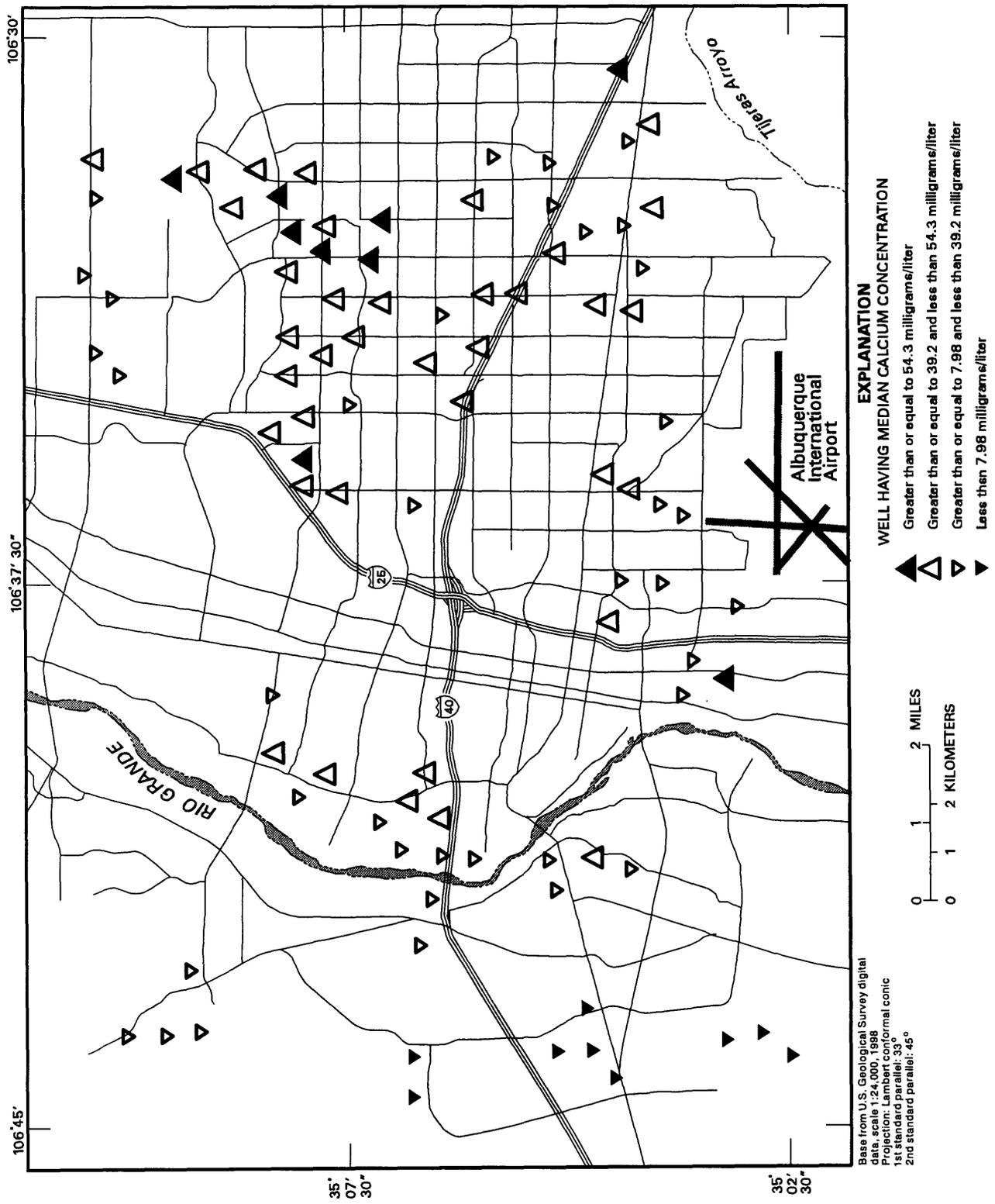
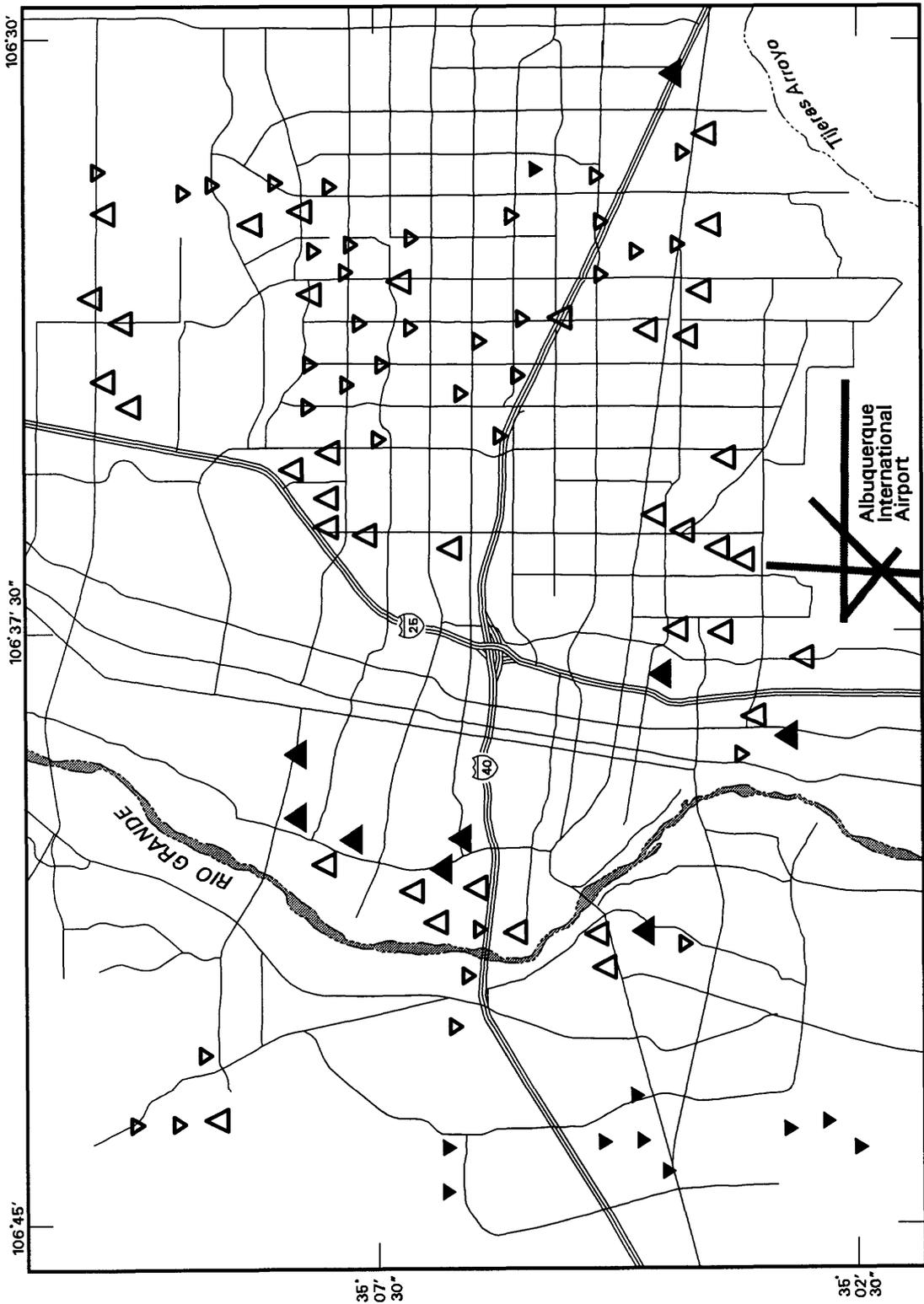


Figure 11. — Median calcium concentrations in City of Albuquerque drinking — water supply wells.

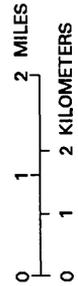


Base from U.S. Geological Survey digital data, scale 1:24,000, 1998  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°

**EXPLANATION**

**WELL HAVING MEDIAN MAGNESIUM CONCENTRATION**

- ▲ Greater than or equal to 8.04 milligrams/liter
- △ Greater than or equal to 4.50 and less than 8.04 milligrams/liter
- ▽ Greater than or equal to 1.16 and less than 4.50 milligrams/liter
- ▼ Less than 1.16 milligrams/liter



Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells

**Figure 12. — Median magnesium concentrations in City of Albuquerque drinking — water supply wells.**

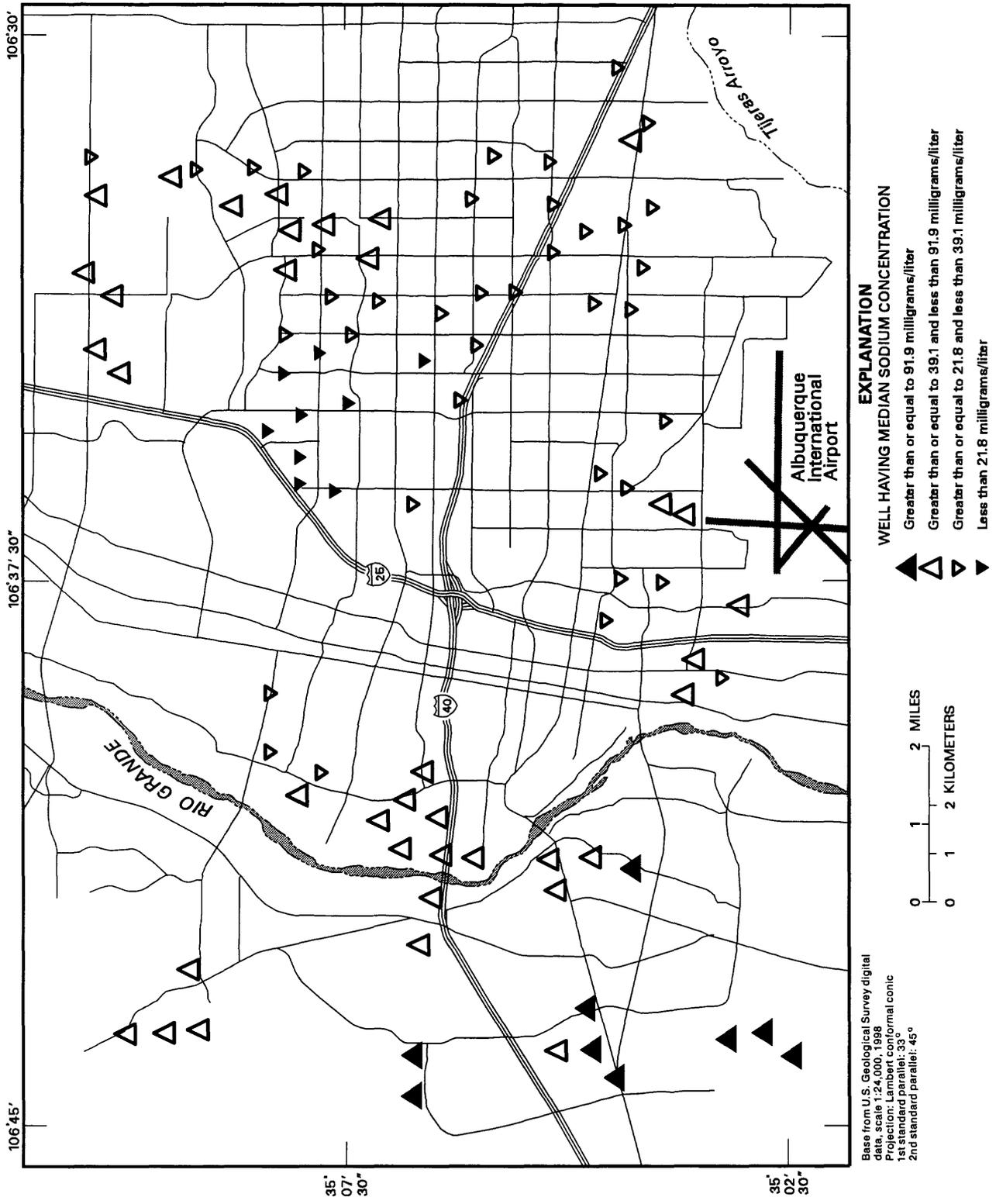


Figure 13. -- Median sodium concentrations in City of Albuquerque drinking -- water supply wells.

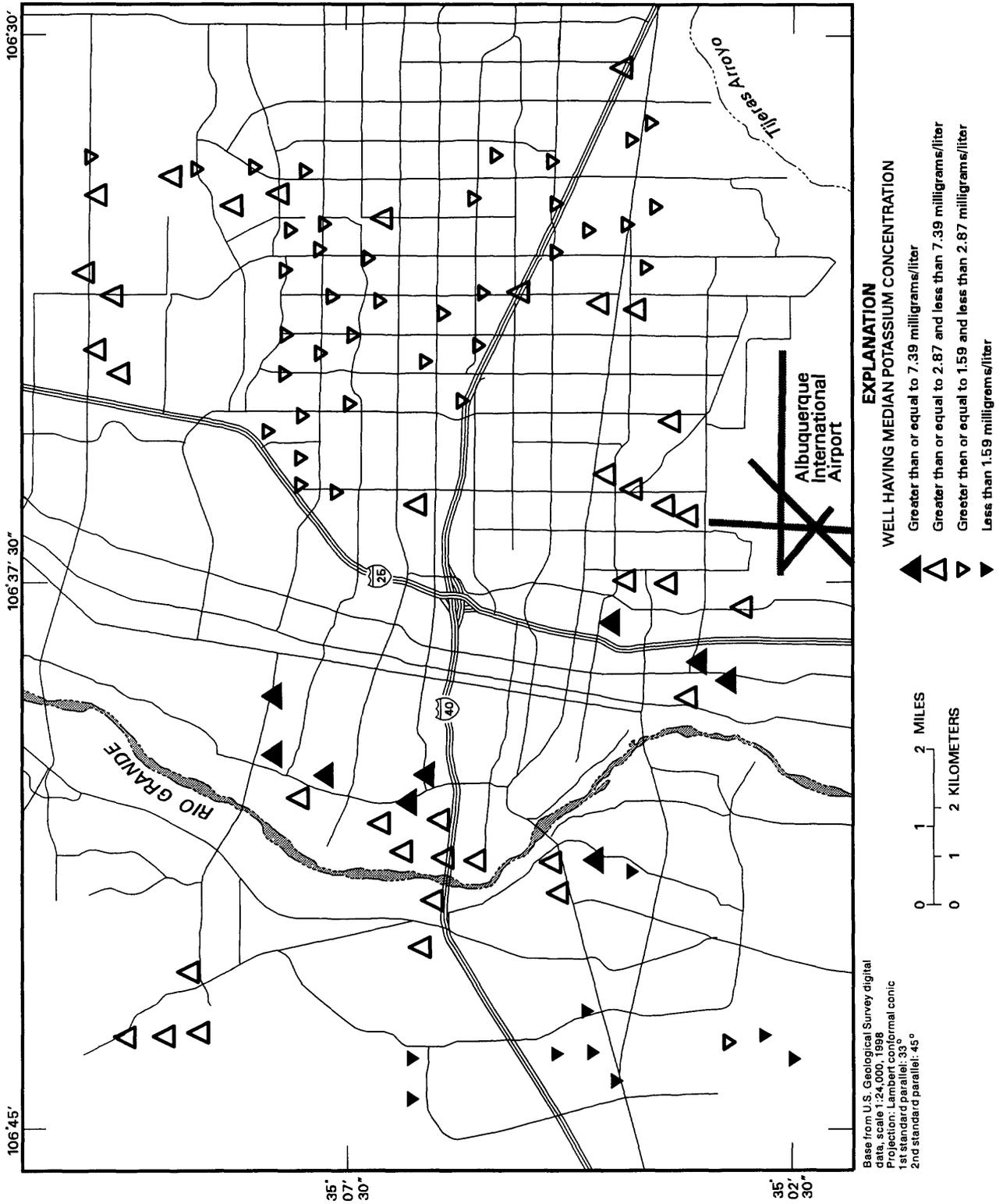


Figure 14. -- Median potassium concentrations in City of Albuquerque drinking -- water supply wells.

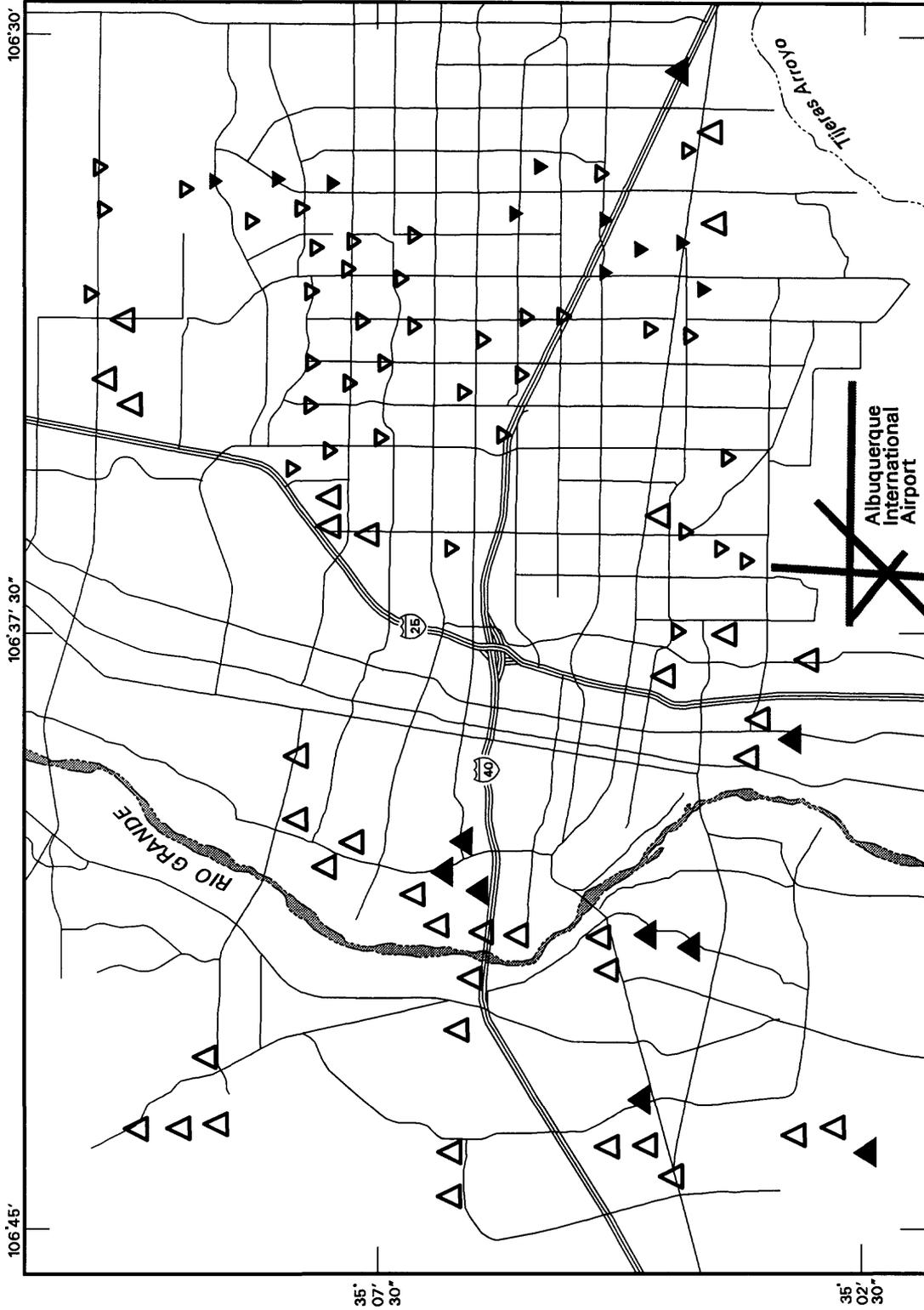


Figure 15. — Median sulfate concentrations in City of Albuquerque drinking — water supply wells.

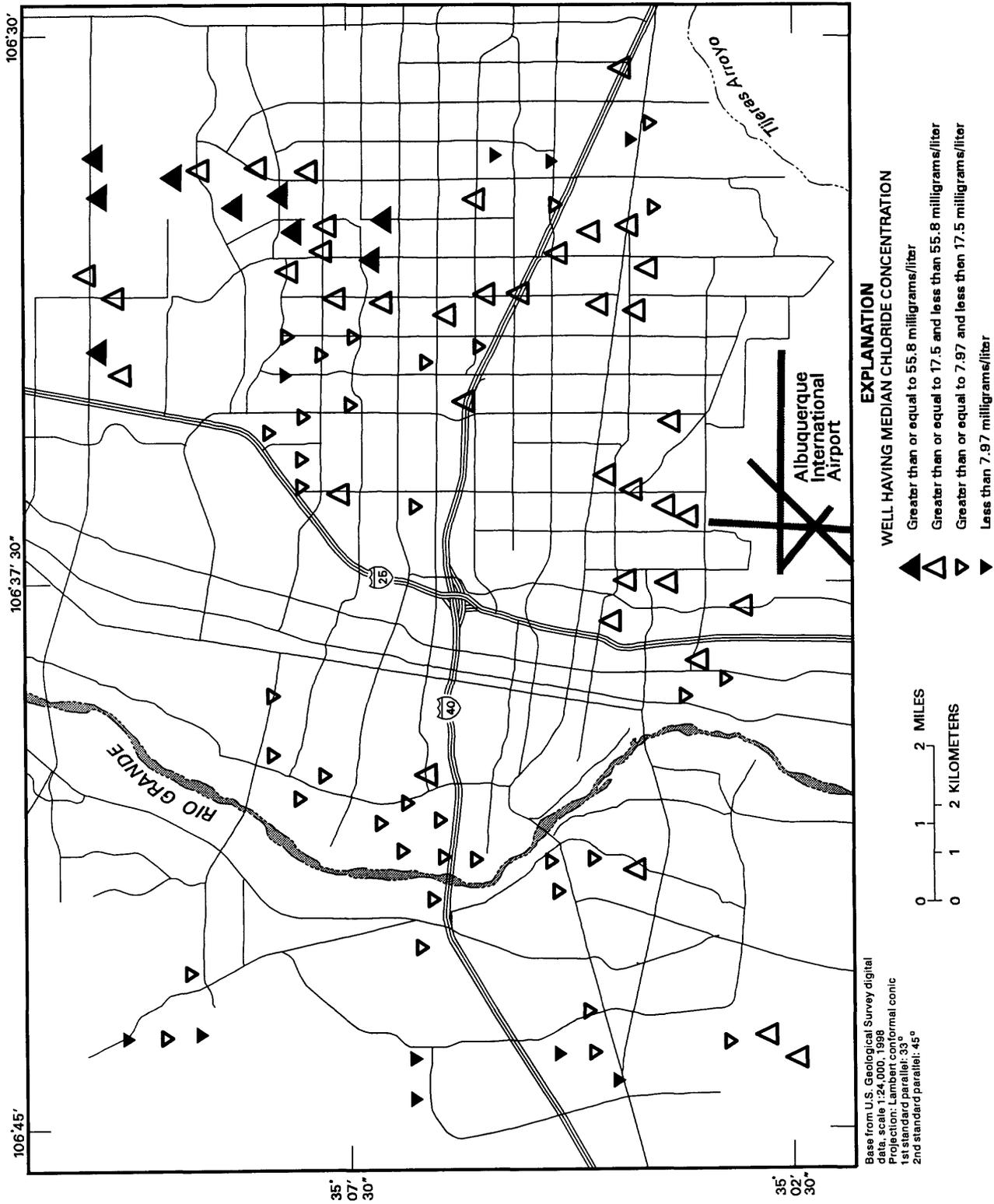


Figure 16. -- Median chloride concentrations in City of Albuquerque drinking -- water supply wells.

Median fluoride concentrations in water range from 0.33 to 1.5 mg/L; the 50th percentile is 0.65 mg/L. All wells west of the Rio Grande have median fluoride concentrations greater than the 50th percentile (fig. 17). Most other wells with relatively large concentrations are in the northeast and southeast corners of the study area. Concentrations less than the 10th percentile are in wells scattered east of the river. None of the median fluoride concentrations exceed the MCL of 4 mg/L or the SMCL of 2 mg/L.

Median silica concentrations in water range from 22.7 to 73.2 mg/L; the 50th percentile is 36.2 mg/L. Wells in which concentrations are greater than the 50th percentile tend to be in a band that runs from the northwest to the south-central part of the study area; relatively large concentrations also occur in wells in the northeast (fig. 18). Median silica concentrations less than the 10th percentile all cluster in wells toward the southeast corner of the study area. The EPA has no standard for silica.

Median concentrations in water for calcium as calcium carbonate, bicarbonate, carbonate, and bromide were not plotted on maps. Calcium as calcium carbonate duplicates information provided by the analysis of calcium as calcium; bicarbonate and carbonate duplicate information provided by analysis of alkalinity and pH. Median calcium as calcium carbonate varies from 8 to 189 mg/L; the 50th percentile is 99.5 mg/L. Median bicarbonate concentrations range from 99.6 to 168 mg/L, and the 50th percentile is 121 mg/L. Median carbonate concentrations range from less than 1 to 14 mg/L, and the 50th percentile is less than 1 mg/L. Median bromide concentrations were not plotted because the median concentrations for all wells were less than the MDL of 0.5 mg/L.

## Nutrients

Median nitrate concentrations in water range from less than 0.05 to 3.38 mg/L; the 50th percentile is 0.30 mg/L. All but one well in which nitrate concentrations are greater than the 90th percentile are west of the Rio Grande (fig. 19). Most wells in which concentrations are greater than the 50th percentile are in clusters west of the river and east of Interstate 25. Concentrations less than the 10th percentile are in wells clustered along the river and scattered elsewhere throughout the study area. None of the median nitrate concentrations exceed the MCL of 10 mg/L.

Median nitrite and median orthophosphate concentrations were not plotted on maps. The median nitrite concentrations in water from all wells were less than the MDL of 0.05 mg/L. The median orthophosphate concentrations in all wells were less than the MDL of 0.5 mg/L.

## Trace Elements

Median arsenic concentrations in water range from less than 2 to 49 µg/L; the 50th percentile is 8 µg/L. Concentrations greater than the 90th percentile are in wells toward the southwest part of the city and along the northern edge east of Interstate 25 (fig. 20). Concentrations greater than the 50th percentile generally are in wells west of the Rio Grande, in the far northeast, and just north and west of Albuquerque International Airport. Most concentrations less than the 10th percentile are in wells in the southeastern part of the study area. None of the median arsenic concentrations exceed the MCL of 50 µg/L.

Median barium concentrations in water range from 8 to 200 µg/L; the 50th percentile is 87 µg/L. All concentrations greater than the 50th percentile are in wells east of Interstate 25 (fig. 21). All concentrations less than the 10th percentile are in wells west of the Rio Grande toward the southern part of the study area. None of the median barium concentrations exceed the MCL of 2 mg/L (2,000 µg/L).

Median boron concentrations in water range from less than 50 to 352 µg/L; the 50th percentile is 110 µg/L. All concentrations greater than the 90th percentile are in wells west of the Rio Grande (fig. 22). Most other wells in which concentrations are greater than the 50th percentile are located west of the Rio Grande, in the northeast, or just north and west of Albuquerque International Airport. Most concentrations less than the 10th percentile are in wells scattered east of Interstate 25. The EPA has no standard for boron.

Median chromium concentrations in water range from less than 1 to 23 µg/L; the 50th percentile is 1 µg/L. All concentrations greater than the 90th percentile are in wells west of the Rio Grande (fig. 23). East of the river, most of the relatively large concentrations are in wells in the southern part of the study area and extend northward in a narrow band. None of the median chromium concentrations exceed the MCL of 0.1 mg/L (100 µg/L).

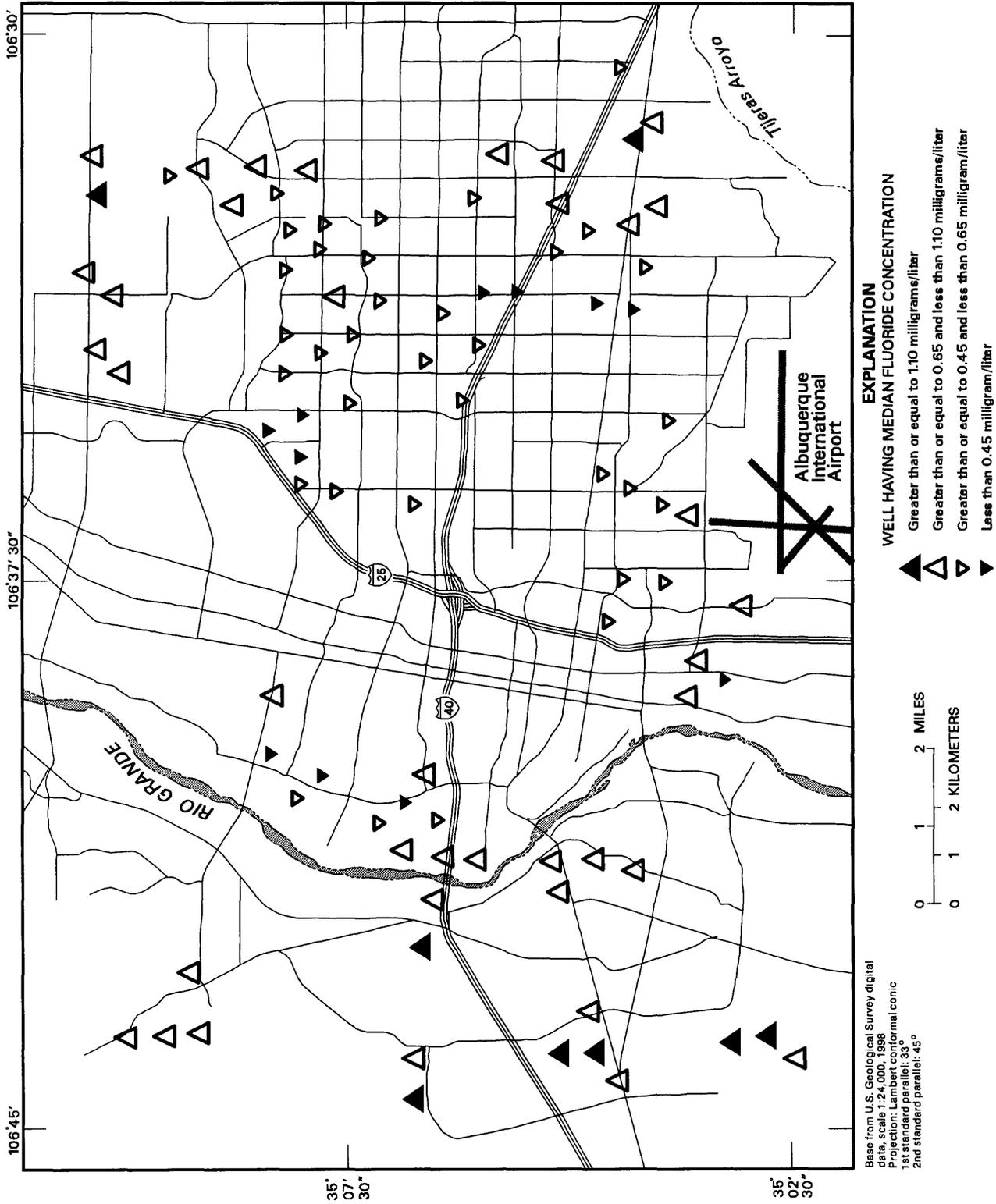


Figure 17. -- Median fluoride concentrations in City of Albuquerque drinking --water supply wells.

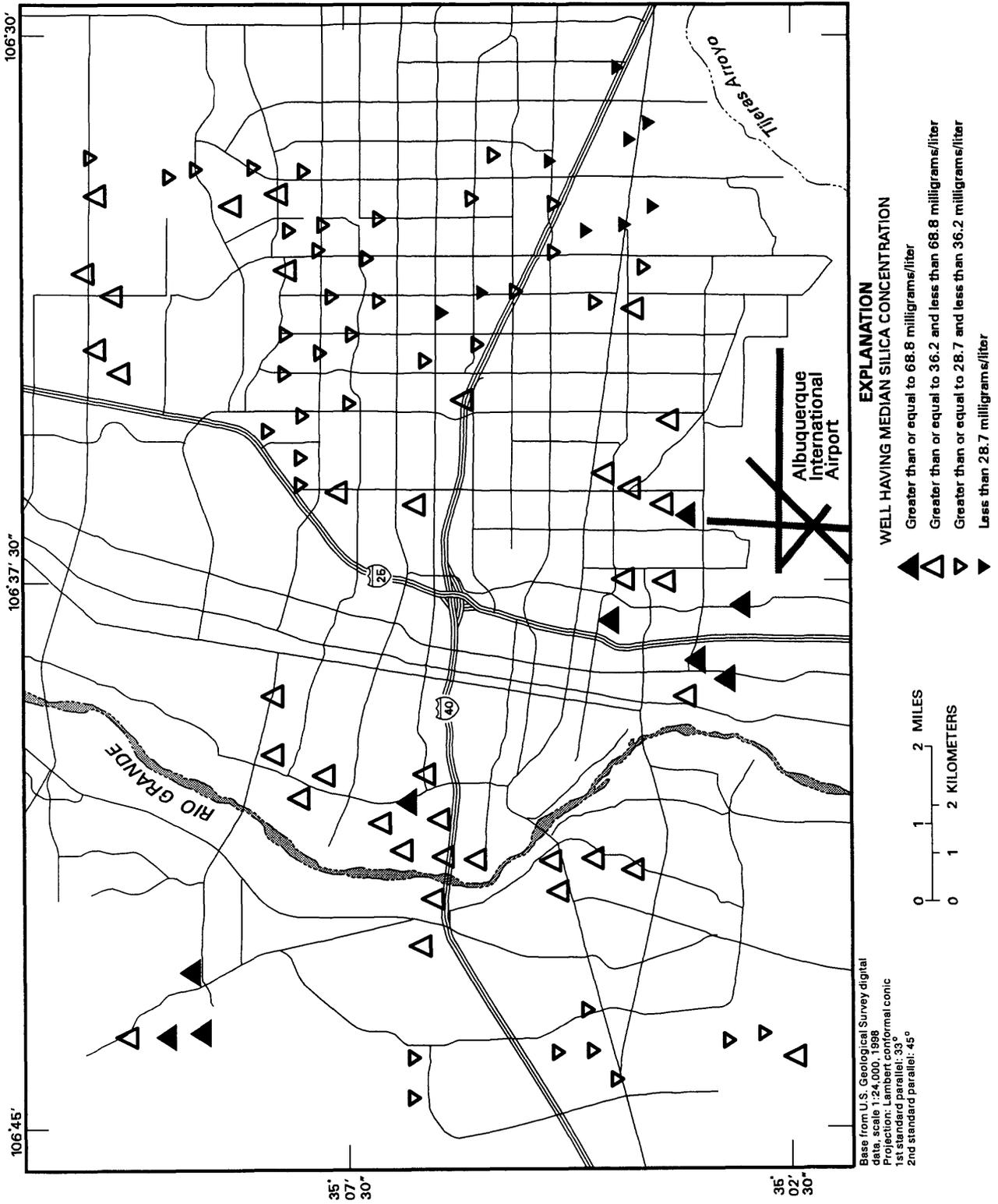
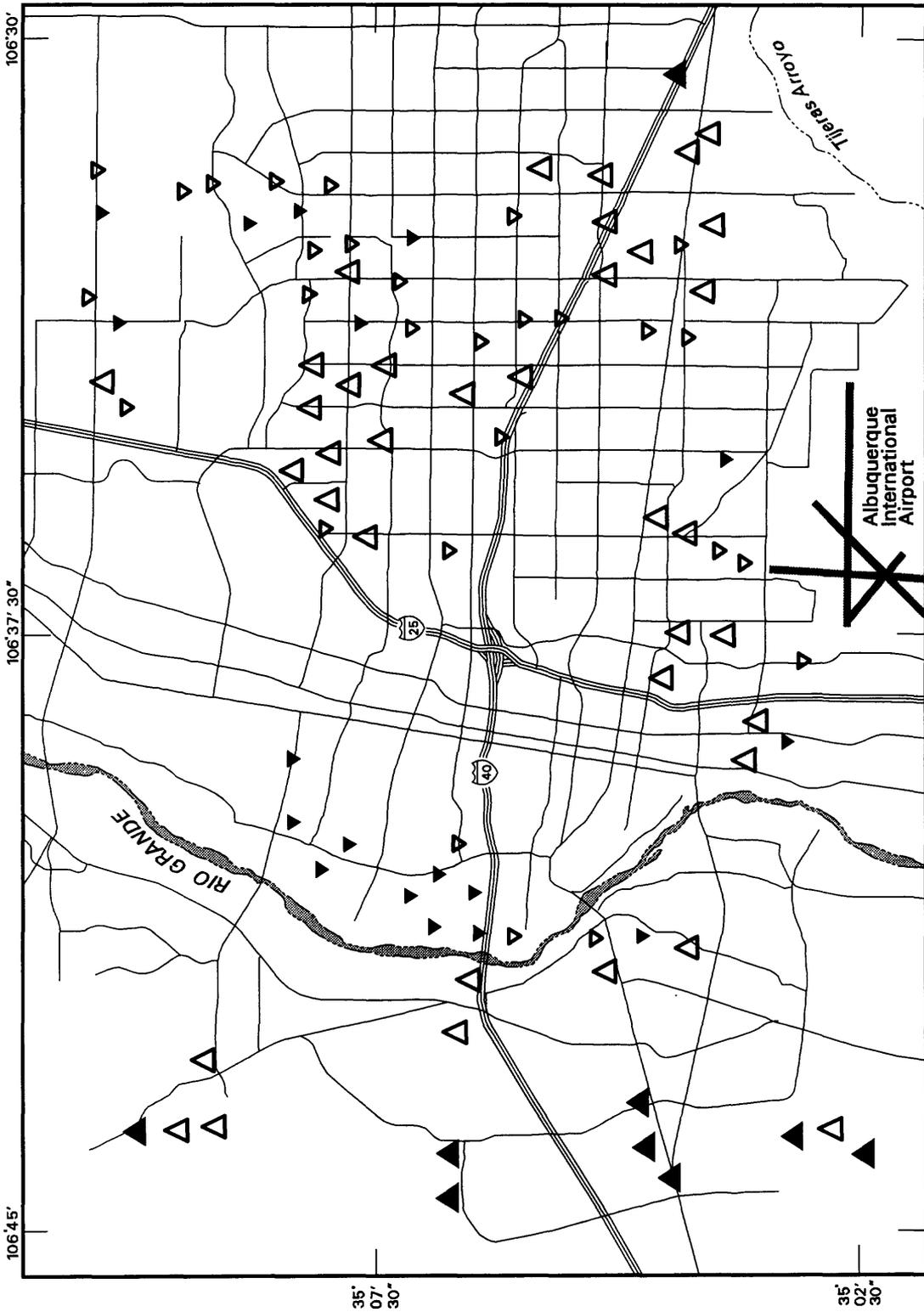


Figure 18. -- Median silica concentrations in City of Albuquerque drinking -- water supply wells.



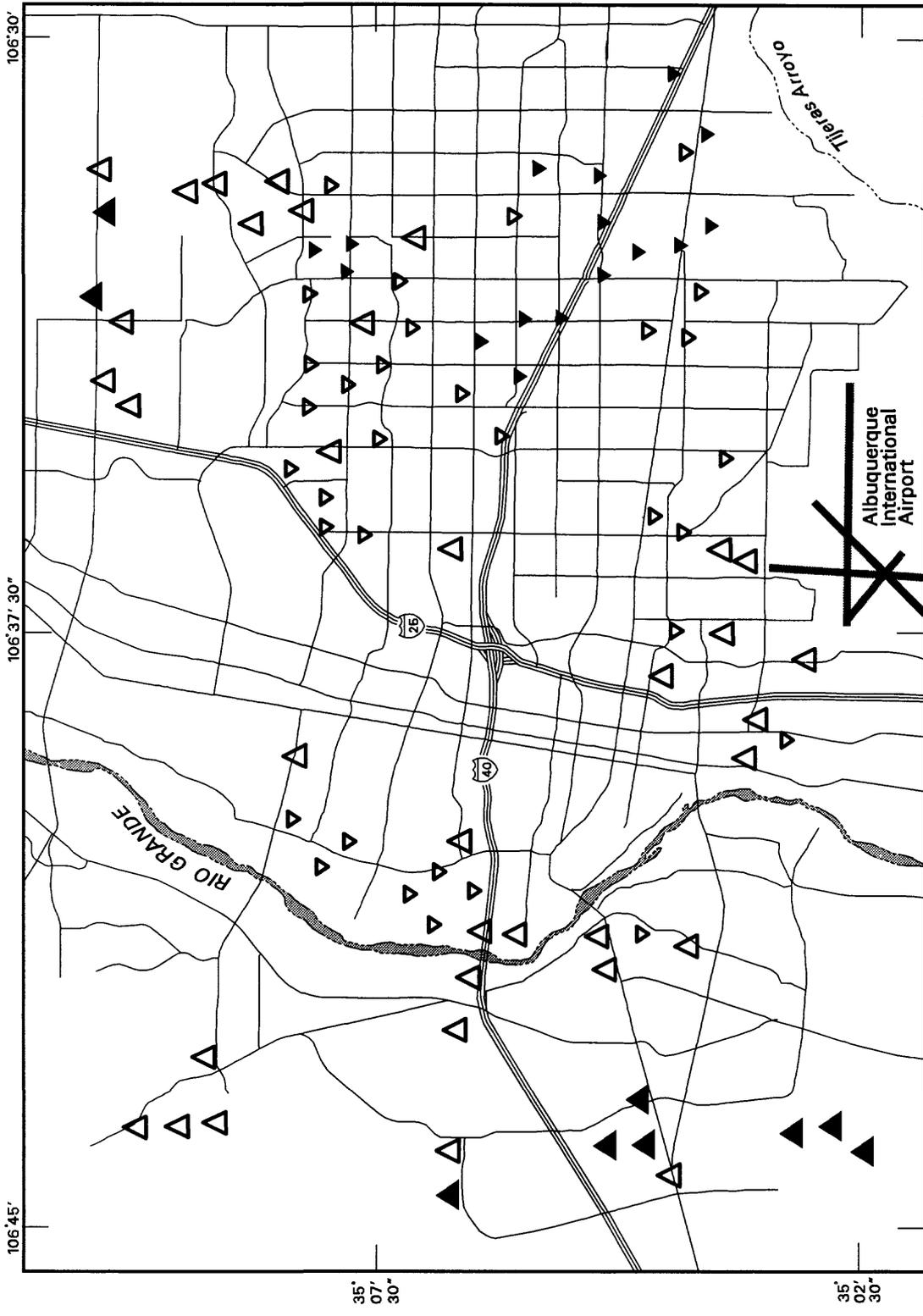
**EXPLANATION**

**WELL HAVING MEDIAN NITRATE CONCENTRATION**

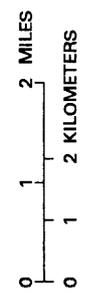
- ▲ Greater than or equal to 1.68 milligrams/liter as nitrogen
- △ Greater than or equal to 0.30 and less than 1.68 milligrams/liter as nitrogen
- ▽ Greater than or equal to 0.05 and less than 0.30 milligram/liter as nitrogen
- ▼ Less than 0.05 milligram/liter as nitrogen

Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells

Figure 19. -- Median nitrate concentrations in City of Albuquerque drinking -- water supply wells.



Base from U.S. Geological Survey digital  
 Data, scale 1:25,000, 1999  
 Projection: North American conic  
 1st standard parallel: 33° 0'  
 2nd standard parallel: 45°



**EXPLANATION**

- WELL HAVING MEDIAN ARSENIC CONCENTRATION**
- ▲ Greater than or equal to 34 micrograms/liter
  - △ Greater than or equal to 8 and less than 34 micrograms/liter
  - ▽ Greater than or equal to 2 and less than 8 micrograms/liter
  - ▼ Less than 2 micrograms/liter

Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells

**Figure 20. — Median arsenic concentrations in City of Albuquerque drinking — water supply wells.**

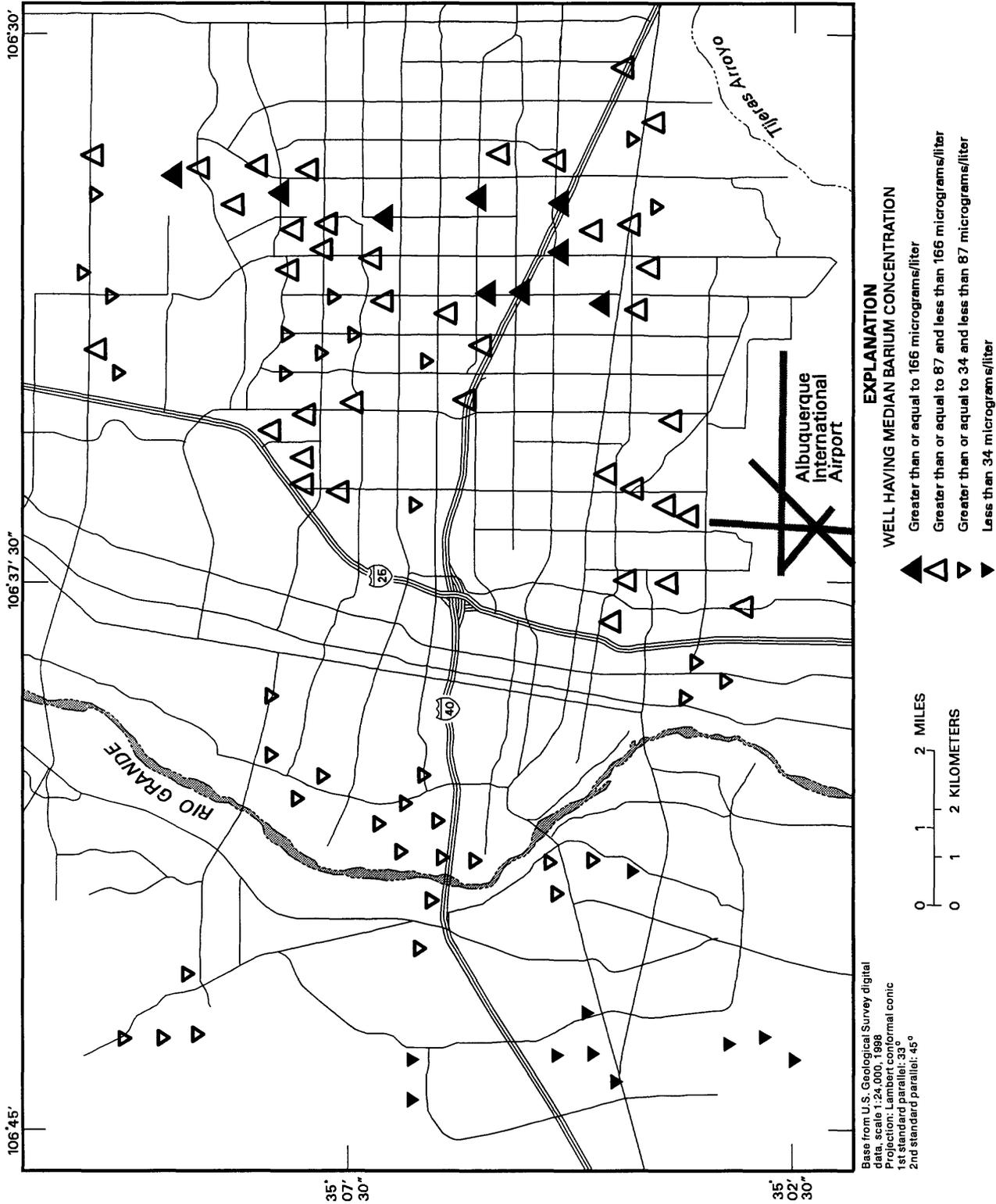
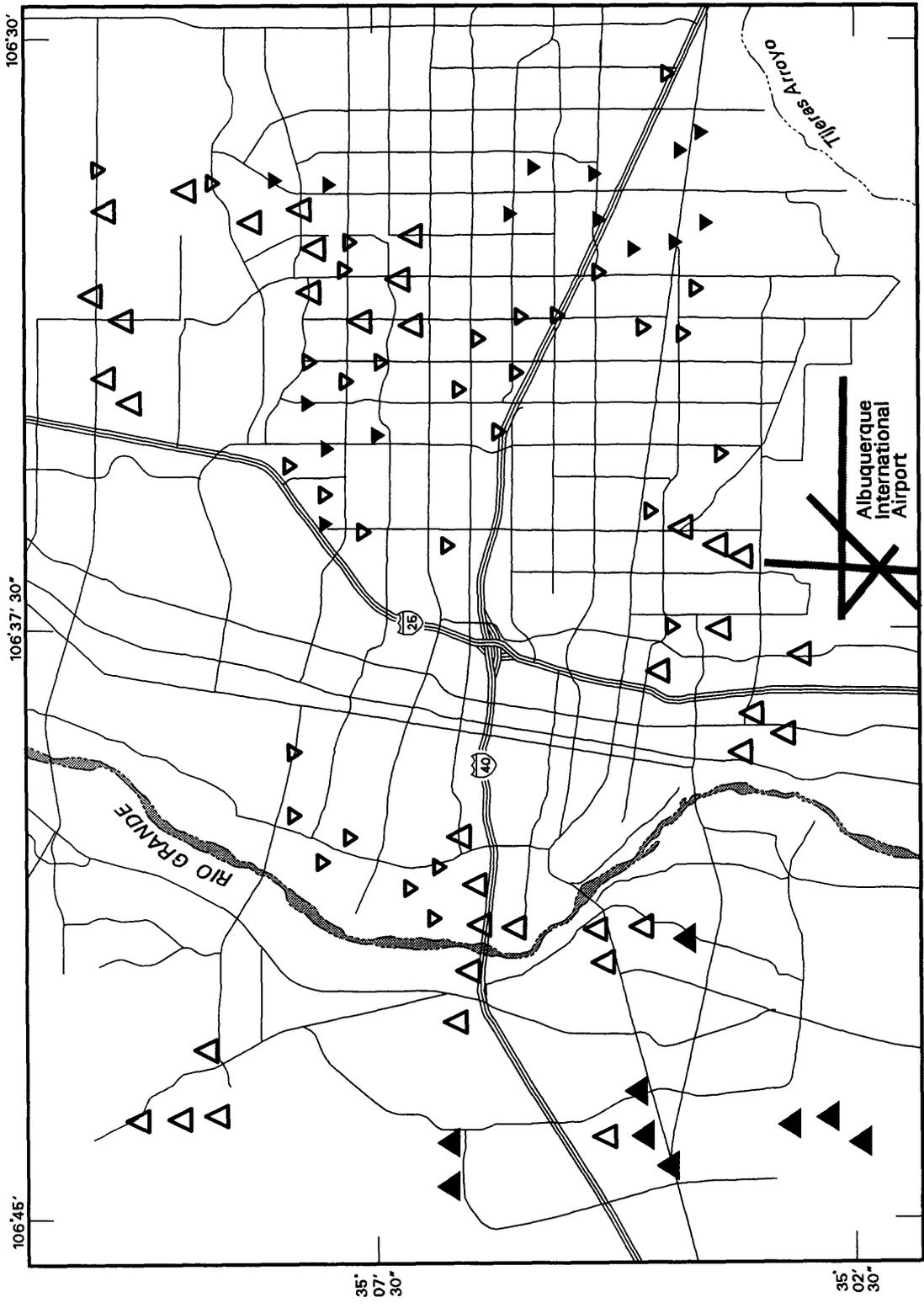


Figure 21. — Median barium concentrations in City of Albuquerque drinking — water supply wells.



Base from U.S. Geological Survey digital  
 scale: 1:24,000, 1998  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°

0 1 2 MILES  
 0 1 2 KILOMETERS

**EXPLANATION**  
**WELL HAVING MEDIAN BORON CONCENTRATION**  
 ▲ Greater than or equal to 232 micrograms/liter  
 △ Greater than or equal to 110 and less than 232 micrograms/liter  
 ▽ Greater than or equal to 50 and less than 110 micrograms/liter  
 ▼ Less than 50 micrograms/liter

Categories based on 10th, 50th, and 80th percentiles of median concentrations for all wells

Figure 22. -- Median boron concentrations in City of Albuquerque drinking -- water supply wells.

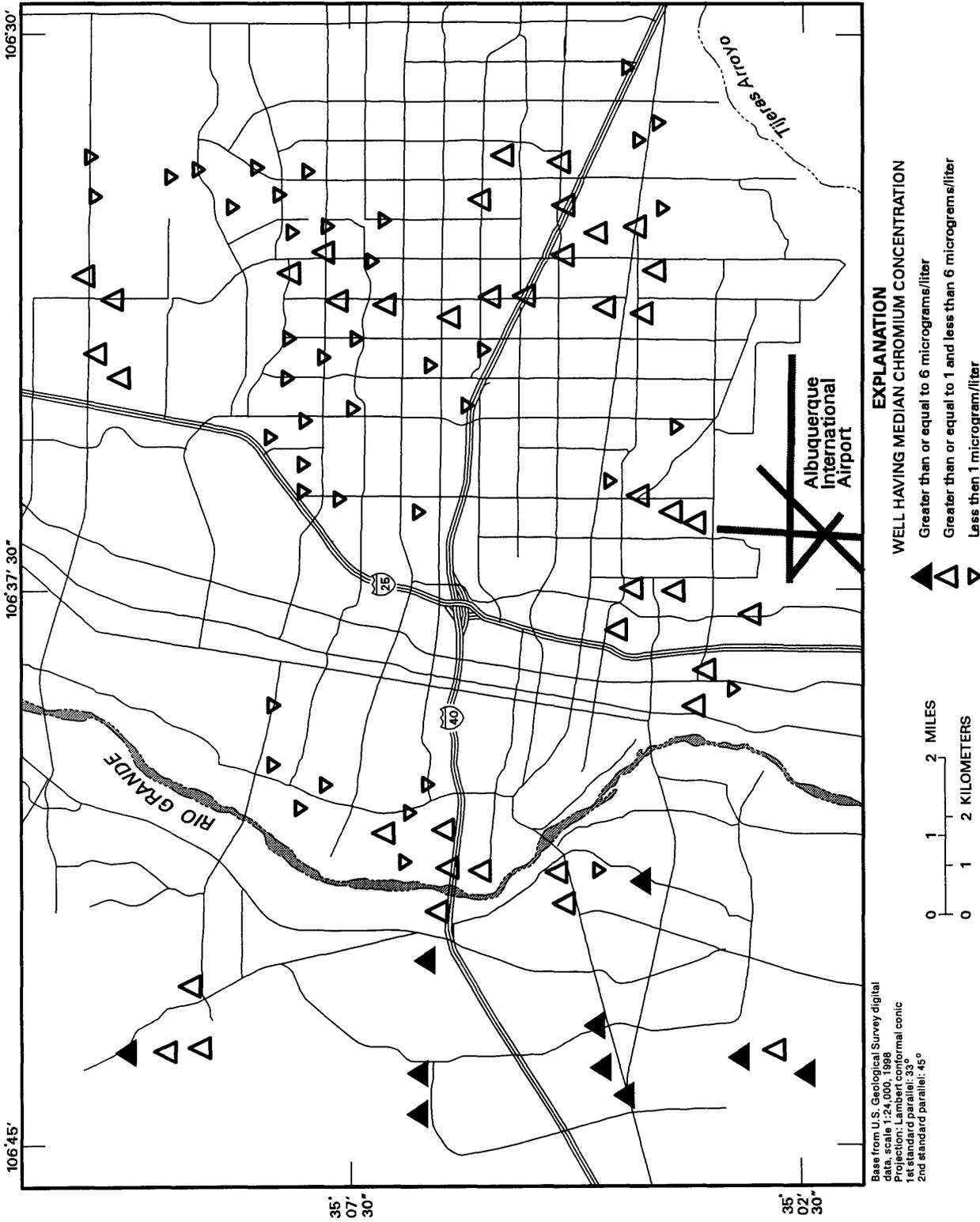


Figure 23. -- Median chromium concentrations in City of Albuquerque drinking -- water supply wells.

Median iron concentrations in water range from less than 10 to 59 µg/L; the 50th percentile is less than 10 µg/L. All but one well in which concentrations are greater than the 90th percentile occur in the northeast (fig. 24). Most other wells in which concentrations are greater than the 50th percentile are scattered east of the Rio Grande, or in clusters in the southeast and near the river. None of the median iron concentrations exceed the SMCL of 0.3 mg/L (300 µg/L).

Median lithium concentrations in water range from 0.01 to 0.19 mg/L; the 50th percentile is 0.04 mg/L. Most concentrations greater than the 50th percentile are in wells along the Rio Grande, in the far northeast, and just north and west of Albuquerque International Airport (fig. 25). Concentrations less than the 10th percentile mainly cluster in wells toward the southeast part of the study area. The EPA has no standard for lithium.

Median manganese concentrations in water range from less than 2 to 114 µg/L; the 50th percentile is less than 2 µg/L. Wells in which concentrations are greater than the 50th percentile are located mostly near the Rio Grande and in the northeast (fig. 26). The median concentrations for two wells, Ponderosa 6 and Duranes 3, exceed the SMCL of 0.05 mg/L (50 µg/L).

Median strontium concentrations in water range from 52 to 869 µg/L; the 50th percentile is 320 µg/L. All wells in which concentrations are less than the 10th percentile are located west of the Rio Grande, toward the south (fig. 27). Most wells in which concentrations are greater than the 50th percentile are located along the Rio Grande and along the southern and eastern edges of the part of the city located east of the river. The EPA has no standard for strontium.

Median vanadium concentrations in water range from less than 10 to 99 µg/L; the 50th percentile is less than 10 µg/L. All wells in which concentrations are greater than the 90th percentile are located west of the Rio Grande toward the south (fig. 28). Most other wells in which concentrations are greater than the 50th percentile are located west of Interstate 25. The EPA has no standard for vanadium.

Median zinc concentrations in water range from less than 5 to 13 µg/L; the 50th percentile is less than 5 µg/L. All wells in which concentrations are greater than the 90th percentile are located east of Interstate 25 (fig. 29). Most wells in which concentrations are greater than the 50th percentile are located east of the Rio Grande. None of the median zinc concentrations exceed the SMCL of 5 mg/L (5,000 µg/L).

Beryllium, cadmium, copper, lead, nickel, selenium, and silver were not plotted on maps because water from fewer than 10 percent of the city's drinking-water supply wells has median concentrations of these trace elements at or above the MDL. The median concentrations of beryllium and nickel are less than the MDL in all wells. The maximum median concentration for cadmium is at the MDL of 0.1 µg/L and for both lead and silver is 3 µg/L. The maximum median concentration for copper is 9 µg/L and for selenium is 2 µg/L.

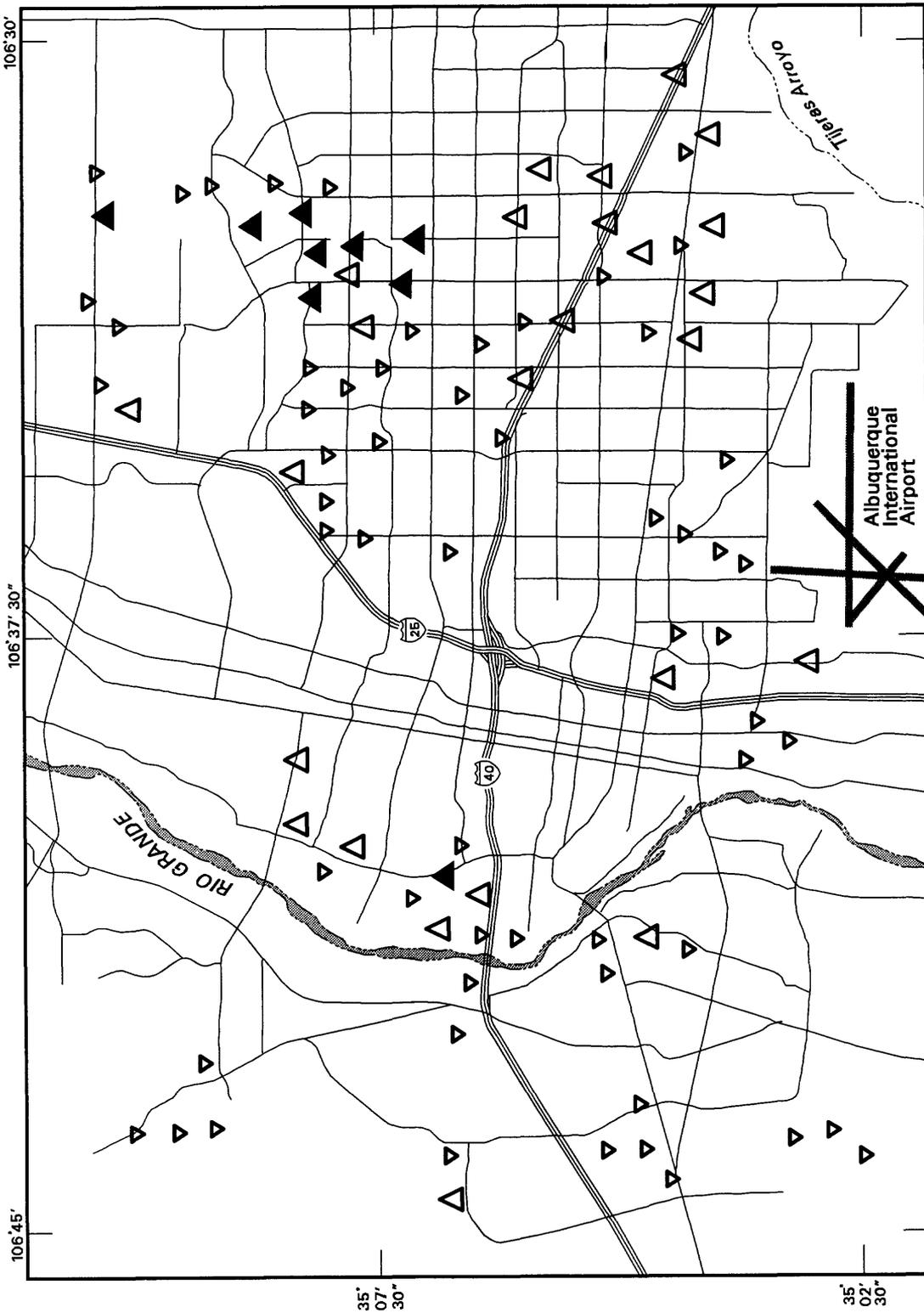
## Carbon

The median concentrations for total organic carbon were not plotted on maps because water from fewer than 10 percent of the city's drinking-water supply wells has median concentrations at or above the MDL of 1 mg/L. The maximum median concentration was 1.52 mg/L.

## Water Types and Compositions

Water-quality data for the 93 City of Albuquerque drinking-water supply wells were plotted on Piper and Stiff diagrams using the median values of the major ion concentrations for each well. Taken together, these median values were assumed to represent the composition of a "typical" water sample from each individual well. To test this assumption, ion balances were calculated using the median concentrations and the most rigorous calculation of ion balance, whereby the difference between the total meq/L of cations and the total meq/L of anions is divided by the average of these two numbers. The concentrations of cations and anions, in meq/L, balanced to within 11 percent for all but one well (Vol Andia 1, which had an ion balance of 15 percent). Therefore, these compositions are considered to be representative of typical water samples and appropriate for plotting.

By using the Piper diagram, water from the 93 wells can be categorized into three different water types with respect to cations and two water types with respect to anions (fig. 30). The three water types with respect to cations are calcium (Ca), sodium plus potassium (Na + K), and mixed cation. Forty-three wells are of the Ca type, 34 are of the Na + K type, and 16 are of the mixed-cation type. The two water



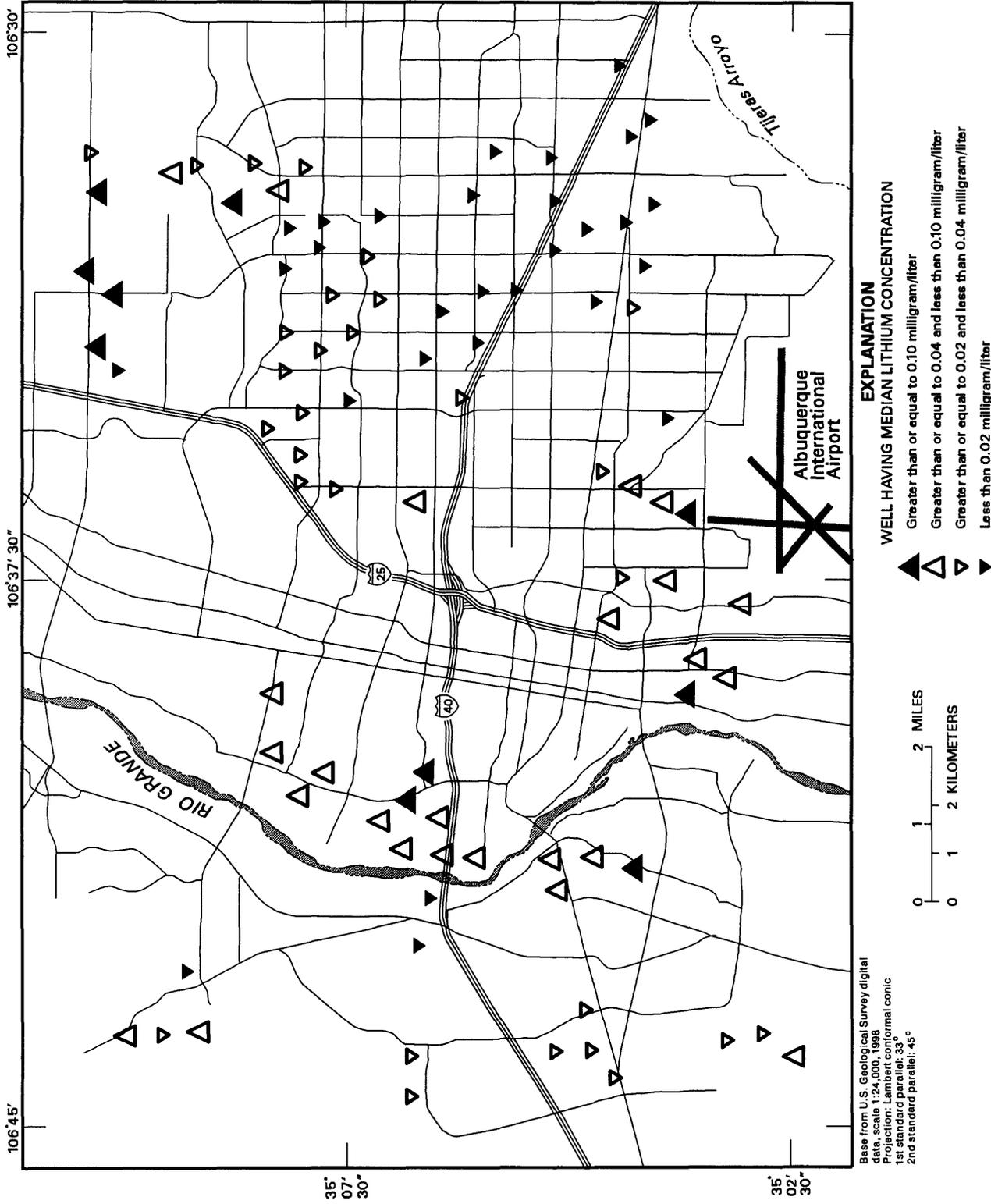
Base from U.S. Geological Survey digital data, scale 1:24,000, 1988  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°

**EXPLANATION**

- WELL HAVING MEDIAN IRON CONCENTRATION**
- ▲ Greater than or equal to 18 micrograms/liter
  - △ Greater than or equal to 10 and less than 18 micrograms/liter
  - ▽ Less than 10 micrograms/liter

Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells, but only three categories shown here because 10th percentile = 50th percentile

Figure 24. — Median iron concentrations in City of Albuquerque drinking — water supply wells.



Base from U.S. Geological Survey digital data  
 Date: 12/2000, 10/98  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°



- EXPLANATION**
- WELL HAVING MEDIAN LITHIUM CONCENTRATION**
- ▲ Greater than or equal to 0.10 milligram/liter
  - △ Greater than or equal to 0.04 and less than 0.10 milligram/liter
  - ▽ Greater than or equal to 0.02 and less than 0.04 milligram/liter
  - ▼ Less than 0.02 milligram/liter

Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells

**Figure 25. -- Median lithium concentrations in City of Albuquerque drinking -- water supply wells.**

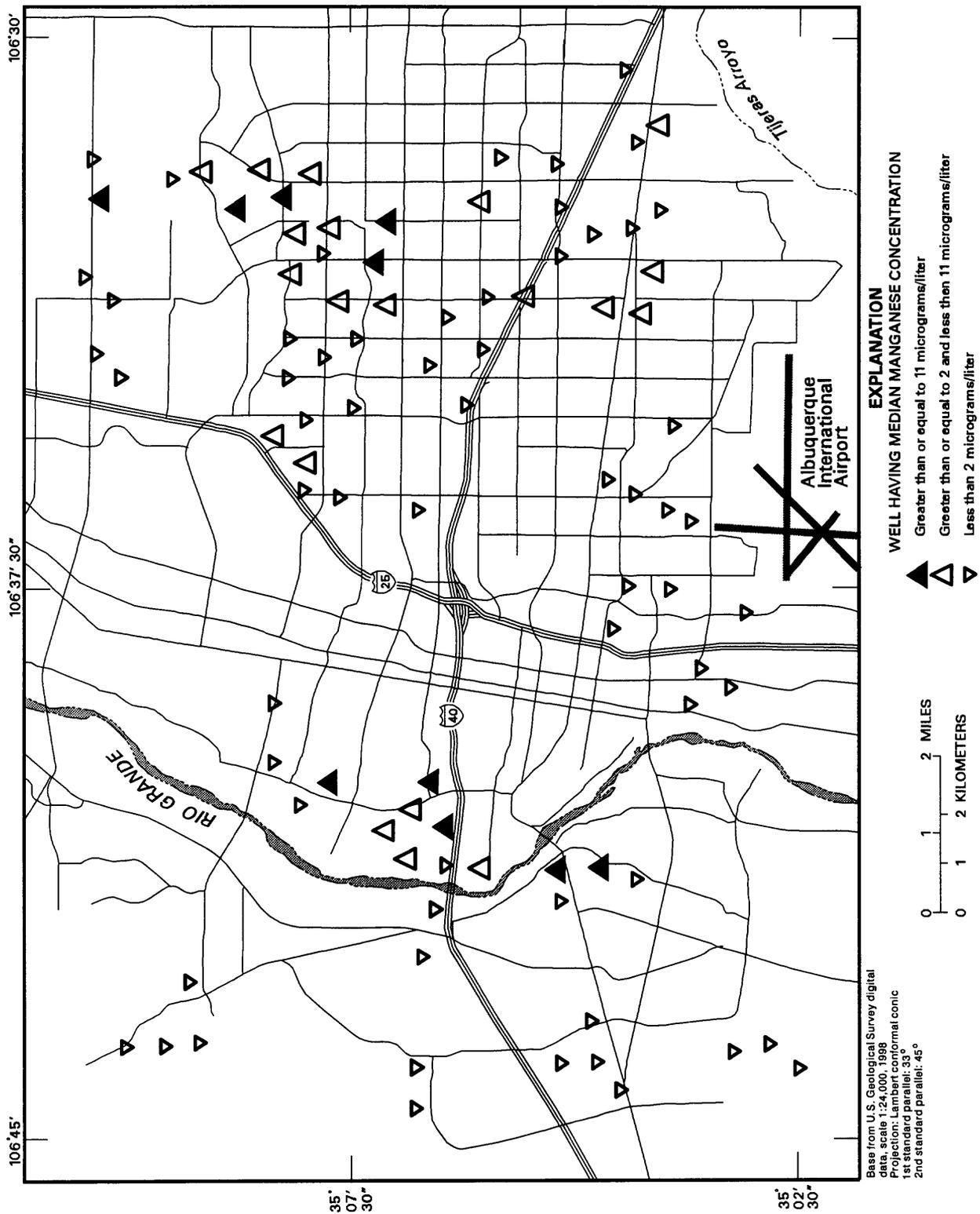
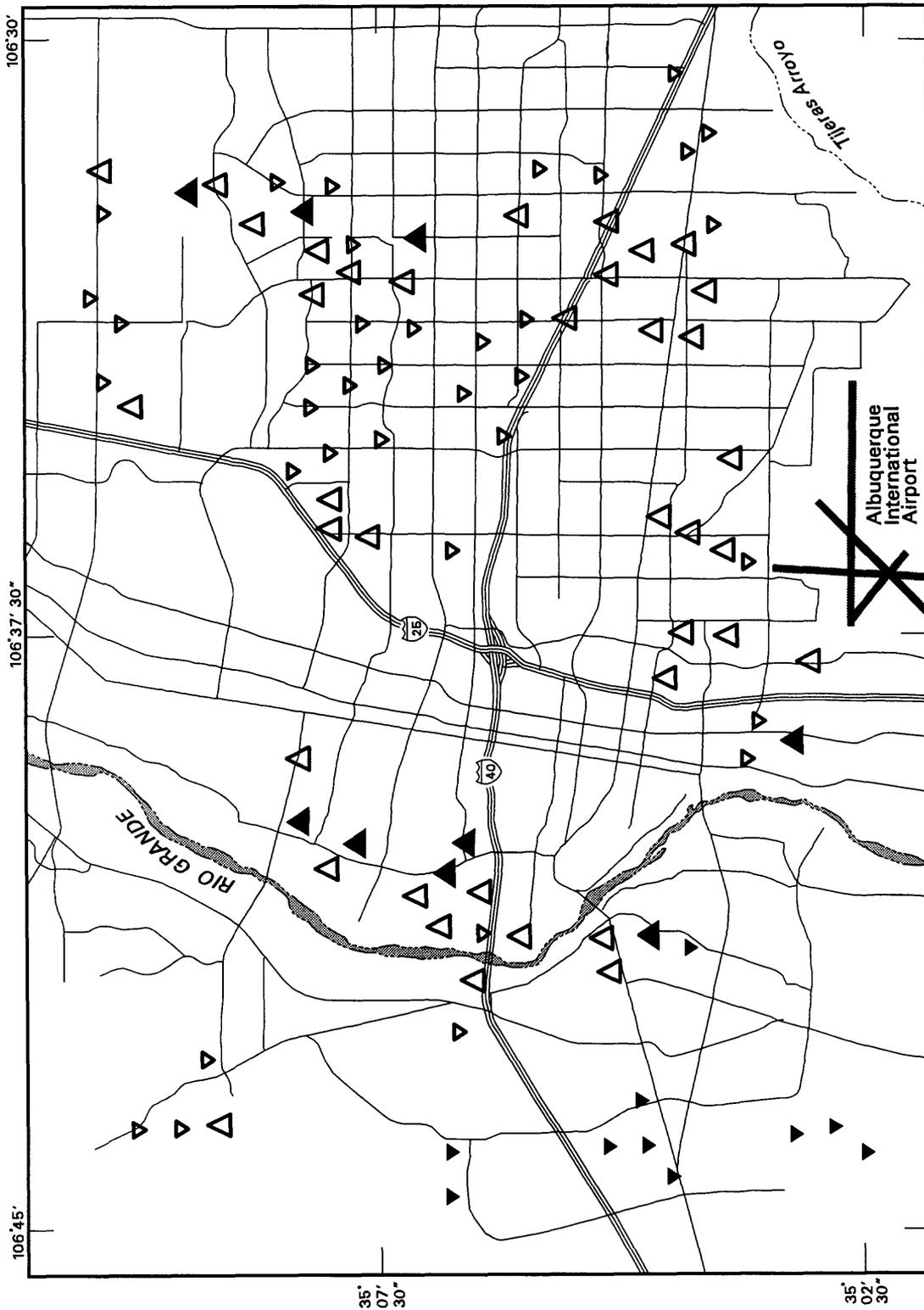


Figure 26. -- Median manganese concentrations in City of Albuquerque drinking -- water supply wells.



Base from U.S. Geological Survey digital data, scale 1:24,000, 1988  
 Projection: Lambert conformal conic  
 1st standard parallel: 33°  
 2nd standard parallel: 45°



**EXPLANATION**

- WELL HAVING MEDIAN STRONTIUM CONCENTRATION**
- ▲ Greater than or equal to 504 micrograms/liter
  - △ Greater than or equal to 320 and less than 504 micrograms/liter
  - ▽ Greater than or equal to 97 and less than 320 micrograms/liter
  - ▼ Less than 97 micrograms/liter

Categories based on 10th, 50th, and 90th percentiles of median concentrations for all wells

**Figure 27. — Median strontium concentrations in City of Albuquerque drinking — water supply wells.**

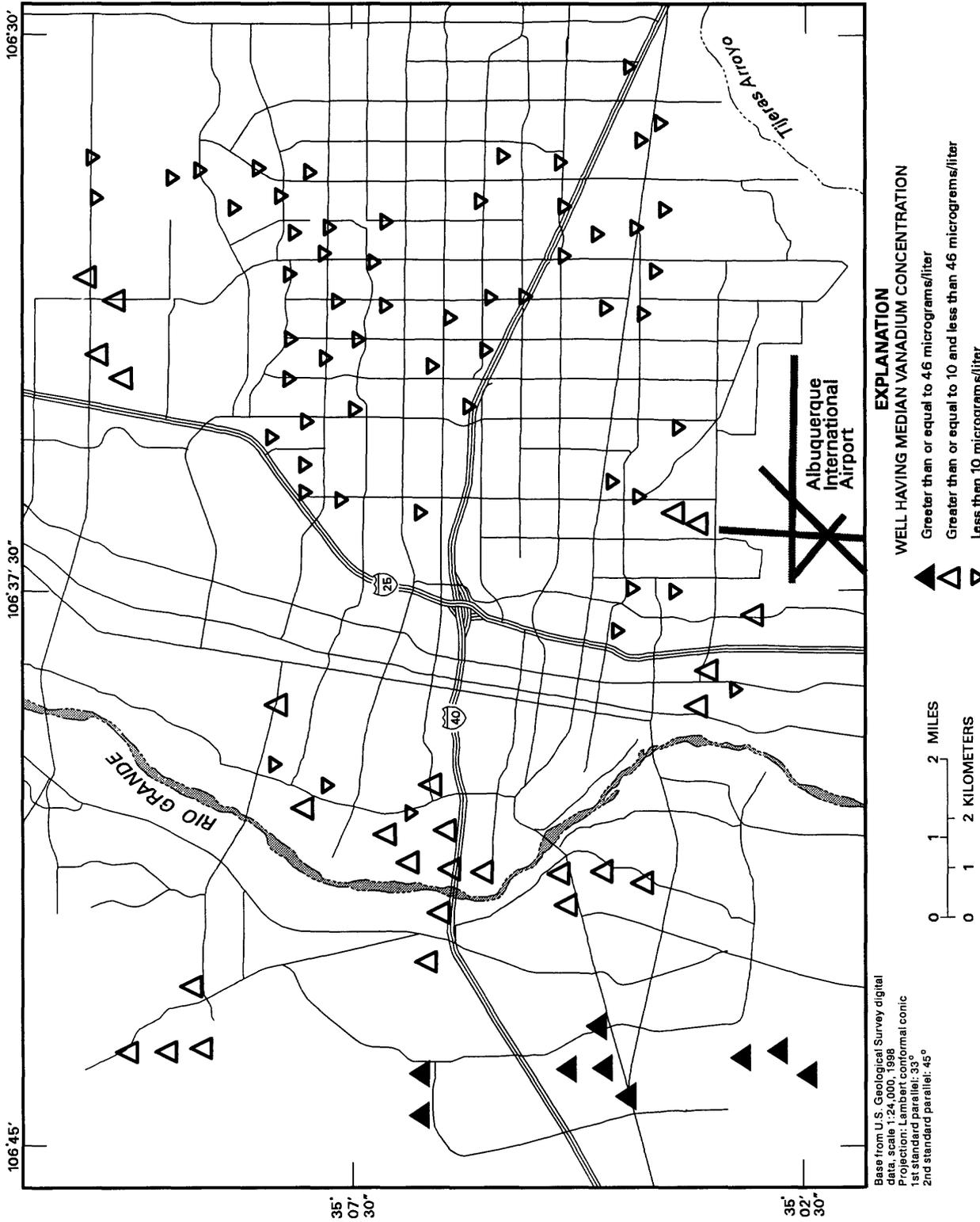


Figure 28. -- Median vanadium concentrations in City of Albuquerque drinking -- water supply wells.

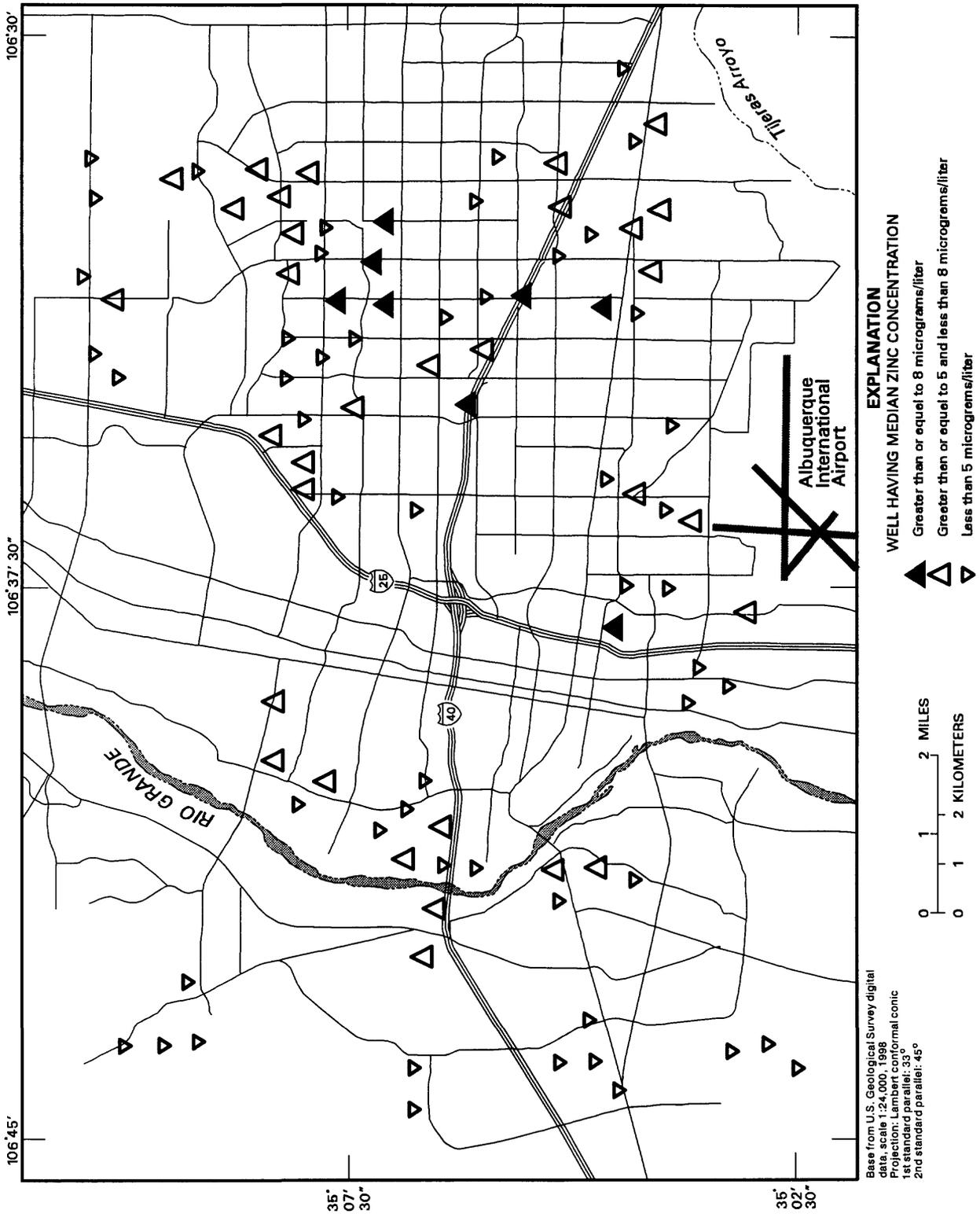
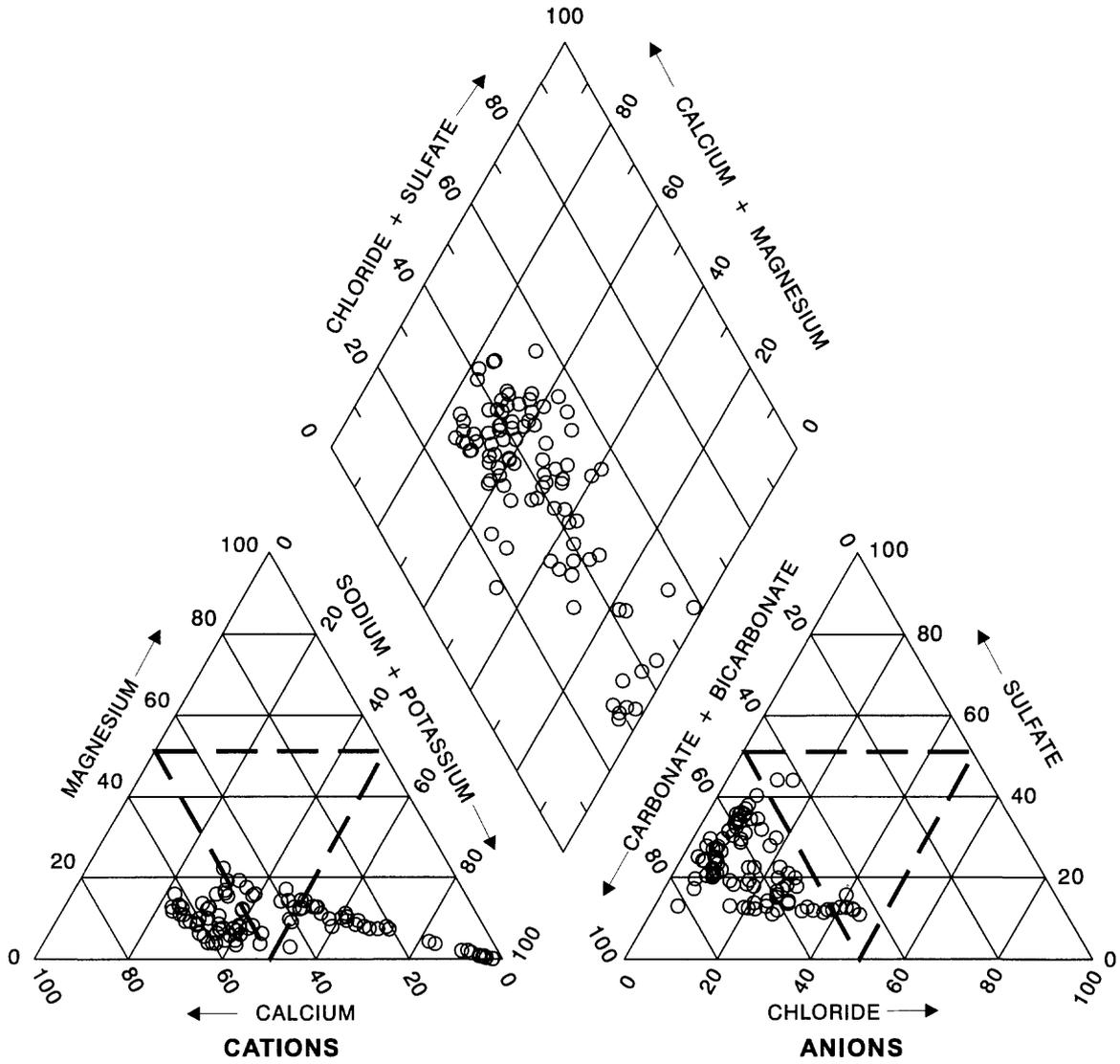


Figure 29. -- Median zinc concentrations in City of Albuquerque drinking -- water supply wells.



**PERCENTAGE OF TOTAL IONS, IN MILLIEQUIVALENTS PER LITER**

Figure 30.--Piper diagram showing compositions of ground water.

types with respect to anions are carbonate plus bicarbonate ( $\text{CO}_3 + \text{HCO}_3$ ) and mixed anion. Eighty-four wells are of the  $\text{CO}_3 + \text{HCO}_3$  type and 9 are of the mixed-anion type. By combining water types with respect to both cations and anions, the overall water types are expressed (for example,  $\text{Na} + \text{K} / \text{CO}_3 + \text{HCO}_3$ ). Water from the City of Albuquerque drinking-water supply wells can be grouped into six overall water types.

Water from wells in specific parts of the city tend to group together with respect to the water types determined from the Piper diagram. Water from 17 of the 19 wells west of the Rio Grande is of the  $\text{Na} + \text{K} / \text{CO}_3 + \text{HCO}_3$  type, and water from the other 2 wells is of the  $\text{Na} + \text{K} / \text{mixed-anion}$  type (pl. 1). Water from the 14 wells between the Rio Grande and Interstate 25 is of either the  $\text{Na} + \text{K} / \text{CO}_3 + \text{HCO}_3$  or the mixed-cation /  $\text{CO}_3 + \text{HCO}_3$  type. The dominant water type east of Interstate 25 is the  $\text{Ca} / \text{CO}_3 + \text{HCO}_3$  type. However, other water types are clustered around the edges of the part of the city located east of the Rio Grande. A few wells with water of the  $\text{Na} + \text{K} / \text{CO}_3 + \text{HCO}_3$  or the mixed-cation /  $\text{CO}_3 + \text{HCO}_3$  type are located toward the southeast corner of the city and just north and west of Albuquerque International Airport. A few other wells with one of these two water types are located along the northern edge of the city. Other water types that appear along the northern edge of the city and southward into the Ponderosa and Thomas well fields are  $\text{Na} + \text{K} / \text{mixed anion}$ ,  $\text{Ca} / \text{mixed anion}$ , and mixed cation / mixed anion.

The varying shapes of the Stiff diagrams (pl. 1) for the city's drinking-water supply wells clearly show the differences in water compositions around the city. For example, diagrams for wells in which  $\text{Na} + \text{K}$  is the dominant cation group, such as wells west of the Rio Grande, tend to have very distinctive asymmetrical shapes that are elongated in the upper left part. By contrast, diagrams for wells in which water has  $\text{Ca}$  and  $\text{CO}_3 + \text{HCO}_3$  as the dominant ions, such as most wells east of Interstate 25, have very symmetrical shapes that are wider in the middle than they are toward the top or the bottom. The Stiff diagrams also show the ranges in concentration for each ion. Magnesium concentrations generally are less than 1 meq/L. Calcium, sulfate, and chloride concentrations typically vary between less than 1 and about 3 meq/L. Sodium plus potassium concentrations typically are between about 1 and 5 meq/L, although the concentration in Leavitt 3 exceeds

5 meq/L. Carbonate plus bicarbonate concentrations generally are between about 2 and 4 meq/L.

## Factors Affecting Summary Results

Because water quality can vary over time, the summary results presented in this report are representative of the "average" quality of water produced from individual wells between 1988 and 1997, but may not be representative of the quality of water produced at any one particular time during that period. The quality of water produced by a well could vary as the result of factors that affect the source of water to the well. For example, the zones of the aquifer that compose the main source of water may change because of changes in the level of the pump or because of clogging of some parts of the well screen over time. Also, water-level decline in the aquifer may cause ground-water flow paths to change, affecting the geographic source of water flowing to the wells. The source of water to a well may be affected more randomly by the frequency and duration that the well has been pumped around the time of sample collection. The magnitude of the standard deviation (tables 1-93) or interquartile range of individual parameters for a particular well may provide an indication of the variation of water quality produced by that well over time.

The summary statistics for individual wells also could be affected by sampling frequency and protocols. Because the City of Albuquerque's water-quality sampling program has been used to investigate specific water-quality issues, such as how much arsenic concentrations vary in individual wells, the frequency of sampling has varied over time for some wells. Therefore, the summary statistics may be biased by the quality of water that was produced by a given well during the years when the most samples were collected. Effects of sampling protocols on summary results may include elevated constituent concentrations resulting from the occasional presence of a large quantity of particulate matter in some of the water samples, which are not filtered. Some trace element concentrations could be elevated as a result of contact of the water sample with the well casing.

No effort was made to compensate for any of the above factors in the calculation of summary statistics for this report. In fact, the effects of many of these factors cannot be readily identified for individual wells

or samples. However, an awareness of the potential for water-quality summary results to be affected by such factors is important.

## SUMMARY

Summary results for water-quality data collected by the City of Albuquerque from its drinking-water supply wells between 1988 and 1997 show that the values of several parameters vary considerably across the Albuquerque area. Nevertheless, median values for all parameters included in this report are less than their respective MCL's in each drinking-water supply well. Median values of pH in 10 wells and median concentrations of manganese in 2 wells exceed the SMCL's established by the EPA. Water types for the City's drinking-water supply wells reflect the variability of major ions in ground water in the area. The dominant anion group in water from most wells around the city is carbonate plus bicarbonate, but the dominant cation or anion group differs, from sodium plus potassium in most wells located west of Interstate 25 to calcium in wells east of the interstate.

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**Table 1.--Construction Information and summary statistics for water-quality data for Atrisco 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'18"	Well capacity (gal/min): 2,730	Ground elevation (ft asl): 4,945
Longitude: 106°41'24"	Cased depth (ft bls): 1,295	Static water level (ft bls): 47
Date drilled: 1980	Screened interval (ft bls): 280-1,283	Static water level date: 3/19/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	100	0	380	471	558	570	573	578	644	547	52
pH, field (standard units)	101	0	7.9	8.39	8.62	8.77	8.88	8.96	9.24	8.72	0.24
pH, lab (standard units)	85	0	7.86	8.66	8.79	8.85	8.89	8.93	9.98	8.82	0.21
Eh, field (mV)	78	0	-4	83	114	146	198	306	615	171	100
Temperature, field (deg C)	101	0	20	30.1	31.3	31.5	31.7	31.7	33	31	1.9
Hardness (mg/L as $\text{CaCO}_3$ )	62	0	19.7	24	25.9	27.4	30	38	66	29.2	7.08
Alkalinity (mg/L as $\text{CaCO}_3$ )	100	0	104	113	115	117	119	125	140	118	5.55
Langelier saturation index (standard units)	97	0	-0.3	0.11	0.32	0.5	0.59	0.69	0.88	0.44	0.22
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	98	0	320	356	366	376	384	394	432	374	18.3
Calcium (mg/L as Ca)	70	0	3.89	6.81	7.6	7.98	8.45	9.2	23.5	8.31	2.28
Calcium (mg/L as $\text{CaCO}_3$ )	94	0	16.1	18	19.8	21	24	26.7	54	22.5	5.39
Magnesium (mg/L as Mg)	68	0	0.51	1.02	1.18	1.32	1.42	1.53	4.85	1.37	0.51
Sodium (mg/L as Na)	70	0	43.4	93.7	102	107	112	116	126	105	12.8
Potassium (mg/L as K)	68	3	<1	1.16	1.34	1.5	1.72	2	5.15	1.62	0.56
Bicarbonate (mg/L as $\text{CaCO}_3$ )	101	0	97.7	105	107	109	113	118	138	111	6.42
Carbonate (mg/L as $\text{CaCO}_3$ )	101	1	<1	4.68	6.17	7.26	7.98	8.52	10	6.86	1.78
Sulfate (mg/L as $\text{SO}_4$ )	101	0	57.6	93.5	108	110	113	116	145	109	9.9
Chloride (mg/L as Cl)	101	0	8.5	18	18.9	19.8	21.7	22.8	41.5	20.2	3.4
Fluoride (mg/L as F)	97	0	0.75	0.84	0.88	0.92	0.94	1	1.1	0.91	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	60	0	33.7	39.8	44.2	46.9	49.1	51.2	54.8	46.2	4.38
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	51	0	0.77	1.39	1.51	1.53	1.6	1.65	1.73	1.52	0.15
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	127	45	21
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	102	0	8	19	20	22	23	25	27	21	3
Barium ( $\mu\text{g/L}$ as Ba)	18	0	3	8	9	10	14	17	18	11	4
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	147	298	311	352	401	430	435	348	77
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	10	--	20	23	28	--	29	23	6
Copper ( $\mu\text{g/L}$ as Cu)	18	16	<5	<5	<5	<5	<5	5	10	5	1
Iron ( $\mu\text{g/L}$ as Fe)	71	66	<10	<10	<10	<10	<10	<10	25	10	2
Lead ( $\mu\text{g/L}$ as Pb)	100	95	<2	<2	<2	<2	<2	<2	18	2	2
Lithium (mg/L as Li)	5	0	0.13	--	0.14	0.15	0.15	--	0.18	0.15	0.02
Manganese ( $\mu\text{g/L}$ as Mn)	71	69	<2	<2	<2	<2	<2	<2	4	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	8	<2	--	<2	<2	<2	--	3	2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	36	76	88	97	130	166	167	105	35
Vanadium ( $\mu\text{g/L}$ as V)	14	0	26	35	41	46	50	52	53	45	7
Zinc ( $\mu\text{g/L}$ as Zn)	18	13	<5	<5	<5	<5	7	14	29	7	6
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	16	<1	<1	<1	<1	<1	<1	1.6	1.04	0.15

**Table 2.--Construction information and summary statistics for water-quality data for Atrisco 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'45"	Well capacity (gal/min): 940	Ground elevation (ft asl): 4,945
Longitude: 106°41'15"	Cased depth (ft bls): 544	Static water level (ft bls): 15
Date drilled: 1950	Screened interval (ft bls): 108-250	Static water level date: 11/30/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	61	0	380	506	536	584	604	608	619	569	46.3
pH, field (standard units)	62	0	6.91	7.14	7.3	7.5	7.6	7.7	8.2	7.46	0.24
pH, lab (standard units)	52	0	7.39	7.55	7.7	7.78	7.84	7.93	8.11	7.76	0.15
Eh, field (mV)	51	0	1	98	129	150	218	454	634	203	143
Temperature, field (deg C)	62	0	16.6	18.1	18.2	18.3	18.4	18.4	20	18.3	0.4
Hardness (mg/L as $\text{CaCO}_3$ )	40	0	123	149	150	153	156	158	160	152	6.47
Alkalinity (mg/L as $\text{CaCO}_3$ )	61	0	150	158	162	165	170	176	178	166	6.55
Langelier saturation index (standard units)	59	0	-0.67	-0.48	-0.3	-0.09	0.02	0.13	0.74	-0.12	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	62	0	256	400	416	428	432	444	620	424	39.9
Calcium (mg/L as Ca)	43	0	30.6	40.1	42.3	44.4	46.8	48	50.8	44.1	3.61
Calcium (mg/L as $\text{CaCO}_3$ )	59	0	95.6	108	114	117	120	129	145	118	7.92
Magnesium (mg/L as Mg)	42	0	4.96	8.7	8.99	9.3	9.85	10.2	10.6	9.28	0.92
Sodium (mg/L as Na)	43	0	37.9	56.9	63.4	66	68.4	70.8	76	64.5	7.16
Potassium (mg/L as K)	42	0	4.97	7.55	8.13	8.66	9.02	9.24	11.1	8.49	0.99
Bicarbonate (mg/L as $\text{CaCO}_3$ )	62	0	148	157	161	164	170	175	178	165	6.73
Carbonate (mg/L as $\text{CaCO}_3$ )	62	38	<1	<1	<1	<1	1.1	1.4	2.78	1.14	0.32
Sulfate (mg/L as $\text{SO}_4$ )	61	0	92.3	95.4	107	111	114	116	144	110	8.21
Chloride (mg/L as Cl)	62	0	8.3	15.1	16.1	16.6	17.4	18	32.9	16.7	2.8
Fluoride (mg/L as F)	62	0	0.6	0.66	0.7	0.72	0.79	0.81	0.87	0.74	0.06
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	36	0	54.9	58.3	63.7	65.9	69	72.8	75.4	65.9	5.3
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	34	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	14	<40	<40	<40	<40	<40	104	158	51	33
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	63	0	4	5	6	7	7	7	9	6	1
Barium ( $\mu\text{g/L}$ as Ba)	16	0	22	44	45	52	56	60	104	53	16
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	61	84	89	139	161	176	195	129	43
Cadmium ( $\mu\text{g/L}$ as Cd)	9	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	5	<1	--	<1	<1	1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	16	11	<5	<5	<5	<5	7	10	41	8	9
Iron ( $\mu\text{g/L}$ as Fe)	44	18	<10	<10	<10	11	19	36	517	30	77
Lead ( $\mu\text{g/L}$ as Pb)	61	53	<2	<2	<2	<2	<2	2	7	2	1
Lithium (mg/L as Li)	4	0	0.06	--	0.06	0.07	0.08	--	0.09	0.07	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	44	0	8	13	15	17	20	21	25	17	4
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	385	580	647	697	765	791	863	695	111
Vanadium ( $\mu\text{g/L}$ as V)	14	1	<10	10	12	12	17	17	19	14	3
Zinc ( $\mu\text{g/L}$ as Zn)	16	8	<5	<5	<5	6	10	236	355	43	101
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	2	<1	<1	1.17	1.52	1.81	2.03	2.08	1.51	0.38

**Table 3.--Construction information and summary statistics for water-quality data for Atrisco 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'14"	Well capacity (gal/min): 1,000	Ground elevation (ft asl): 4,950
Longitude: 106°41'18"	Cased depth (ft bls): 804	Static water level (ft bls): 9.54
Date drilled: 1958	Screened interval (ft bls): 180-804	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	74	0	300	361	437	460	467	471	520	443	45
pH, field (standard units)	74	0	7	7.49	7.59	7.8	8	8.12	9.2	7.81	0.31
pH, lab (standard units)	59	0	7.5	7.88	7.98	8.04	8.09	8.15	8.26	8.02	0.14
Eh, field (mV)	55	0	47	87	129	160	203	267	569	183	102
Temperature, field (deg C)	74	0	14	17.6	18	18.5	18.8	19	33.3	18.5	1.9
Hardness (mg/L as $\text{CaCO}_3$ )	50	0	78.7	83.3	85.1	87.4	92.3	100	105	89.1	6.22
Alkalinity (mg/L as $\text{CaCO}_3$ )	75	0	116	125	126	128	131	139	146	129	5.41
Langelier saturation index (standard units)	71	0	-0.8	-0.42	-0.3	-0.1	0.1	0.22	1.47	-0.08	0.33
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	74	0	200	295	308	320	328	340	400	317	26.2
Calcium (mg/L as Ca)	54	0	18.7	23.3	24.7	25.9	27.6	30.5	32.9	26.3	2.87
Calcium (mg/L as $\text{CaCO}_3$ )	70	0	60	63.2	65.1	68.2	72	78	94.5	69.4	6.18
Magnesium (mg/L as Mg)	52	0	3.67	4.71	4.95	5.19	5.54	6.02	6.31	5.25	0.53
Sodium (mg/L as Na)	54	0	44.8	50.7	57	61	63.5	66.3	78.4	60.1	6.9
Potassium (mg/L as K)	52	0	4.53	5.48	5.72	6	6.37	6.79	7.57	6.05	0.57
Bicarbonate (mg/L as $\text{CaCO}_3$ )	74	0	112	124	125	126	130	138	144	128	5.58
Carbonate (mg/L as $\text{CaCO}_3$ )	75	19	<1	<1	<1	1.27	1.51	1.88	3.33	1.37	0.42
Sulfate (mg/L as $\text{SO}_4$ )	74	0	60.7	65.5	72.5	78.4	80.8	82.6	92.2	76.4	6.64
Chloride (mg/L as Cl)	75	0	7.25	11.2	12.1	12.8	13.7	14.4	28	13.1	2.82
Fluoride (mg/L as F)	72	0	0.7	0.78	0.81	0.87	0.92	0.97	1.02	0.87	0.07
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	44	0	44.2	49.5	53.7	57.2	60.2	61.8	69.6	56.7	5.21
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	35	6	<0.05	<0.05	0.1	0.16	0.18	0.41	0.51	0.18	0.12
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	15	<40	<40	<40	<40	<40	115	127	50	26
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	75	0	5	7	8	9	10	11	13	9	1
Barium ( $\mu\text{g/L}$ as Ba)	18	0	39	40	43	46	49	58	74	48	8
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	1	<50	126	129	140	166	173	177	141	33
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	1	--	2	2	3	--	4	3	1
Copper ( $\mu\text{g/L}$ as Cu)	18	9	<5	<5	<5	<5	12	17	121	14	27
Iron ( $\mu\text{g/L}$ as Fe)	54	34	<10	<10	<10	<10	12	16	1260	44	180
Lead ( $\mu\text{g/L}$ as Pb)	74	63	<2	<2	<2	<2	<2	3	18	3	2
Lithium (mg/L as Li)	6	0	0.05	--	0.06	0.06	0.08	--	0.08	0.07	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	54	0	13	17	19	21	24	32	37	22	6
Nickel ( $\mu\text{g/L}$ as Ni)	16	15	<5	<5	<5	<5	<5	<5	12	5	2
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	7	<2	--	<2	<2	<2	--	2	2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	345	375	383	408	444	514	523	420	48
Vanadium ( $\mu\text{g/L}$ as V)	14	0	13	13	14	16	19	23	28	17	4
Zinc ( $\mu\text{g/L}$ as Zn)	18	8	<5	<5	<5	6	10	28	63	12	14
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	5	<1	<1	<1	1.06	1.64	1.87	4.05	1.4	0.75

**Table 4.--Construction information and summary statistics for water-quality data for Atrisco 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'09"	Well capacity (gal/min): 1,500	Ground elevation (ft asl): 4,950
Longitude: 106°41'42"	Cased depth (ft bls): 500	Static water level (ft bls): 12.32
Date drilled: 1962	Screened interval (ft bls): 98-475	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	70	0	280	388	450	465	482	490	533	454	48.1
pH, field (standard units)	70	0	7.09	7.47	7.65	7.79	7.9	8.06	8.8	7.79	0.25
pH, lab (standard units)	58	0	7.5	7.76	7.9	7.98	8.01	8.09	8.23	7.94	0.14
Eh, field (mV)	56	0	30	106	125	167	209	285	594	184	98
Temperature, field (deg C)	70	0	19.3	20.5	21.2	21.5	21.8	21.9	23	21.4	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	46	0	76	86.1	89.6	94	100	112	125	95.5	10.3
Alkalinity (mg/L as $\text{CaCO}_3$ )	70	0	125	130	133	135	138	146	167	137	6.99
Langelier saturation index (standard units)	68	0	-0.6	-0.36	-0.2	-0.05	0.06	0.2	0.51	-0.06	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	70	0	275	306	316	336	344	358	396	334	23.4
Calcium (mg/L as Ca)	51	0	16	23.8	25.7	27.7	29.4	32.1	39.7	27.6	3.73
Calcium (mg/L as $\text{CaCO}_3$ )	66	0	60	61.5	66	71	76.4	81.9	104	71.7	8.53
Magnesium (mg/L as Mg)	49	0	2.97	5.12	5.56	5.8	6.29	6.94	8.41	5.87	0.86
Sodium (mg/L as Na)	51	0	35	53.5	58.7	61.6	65.2	67.9	76.7	60.8	7.31
Potassium (mg/L as K)	49	0	3.53	5.73	6.28	6.56	6.93	7.52	8.16	6.56	0.82
Bicarbonate (mg/L as $\text{CaCO}_3$ )	71	0	121	128	131	133	137	144	166	135	7.17
Carbonate (mg/L as $\text{CaCO}_3$ )	71	19	<1	<1	<1	1.2	1.36	1.69	3.8	1.3	0.46
Sulfate (mg/L as $\text{SO}_4$ )	69	0	57.3	62.7	69.8	77.1	79.6	85	100	75.2	8.18
Chloride (mg/L as Cl)	71	0	8.87	11.2	11.8	12.2	12.6	13.5	24.5	12.7	2.53
Fluoride (mg/L as F)	69	0	0.74	0.9	0.95	1.01	1.05	1.11	1.18	1	0.09
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	43	0	46.2	59.1	61.9	65.8	68.8	74.2	76.6	65.6	6.27
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	37	0	0.21	0.3	0.31	0.37	0.42	0.55	0.61	0.38	0.09
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	14	<40	<40	<40	<40	<40	107	109	49	23
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	71	0	5	8	9	10	11	11	12	10	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	27	44	46	50	61	71	78	54	12
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	0	68	87	118	147	169	177	180	139	36
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	3	<0.1	--	<0.1	0.1	0.1	--	0.7	0.2	0.2
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	1	<1	--	2	3	3	--	4	3	1
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	13	<5	<5	<5	<5	<5	6	8	5	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	51	39	<10	<10	<10	<10	<10	14	35	12	5
Lead ( $\mu\text{g}/\text{L}$ as Pb)	70	65	<2	<2	<2	<2	<2	<2	5	2	0
Lithium (mg/L as Li)	4	0	0.06	--	0.06	0.07	0.07	--	0.08	0.07	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	51	47	<2	<2	<2	<2	<2	<2	3	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	5	<2	--	<2	<2	<2	--	2	2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	222	336	375	406	471	558	642	425	96
Vanadium ( $\mu\text{g}/\text{L}$ as V)	12	0	14	15	19	20	24	27	31	21	5
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	10	<5	<5	<5	<5	6	12	23	7	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	6	<1	<1	<1	1.06	1.48	1.89	7.12	1.58	1.56

**Table 5.--Construction information and summary statistics for water-quality data for Burton 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°03'59"	Well capacity (gal/min): 2,750	Ground elevation (ft asl): 5,315
Longitude: 106°36'24"	Cased depth (ft bls): 1,312	Static water level (ft bls): 447.03
Date drilled: 1985	Screened interval (ft bls): 676-1,292	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	39	0	280	320	381	411	424	434	454	396	43.3
pH, field (standard units)	40	0	7.29	7.59	7.72	7.84	7.92	8.09	8.12	7.82	0.19
pH, lab (standard units)	27	0	7.39	7.54	7.9	7.96	8.02	8.09	8.22	7.91	0.19
Eh, field (mV)	25	0	95	106	125	147	199	386	449	181	99
Temperature, field (deg C)	40	0	21	24	24.3	24.5	24.8	25.1	26.7	24.4	1
Hardness (mg/L as CaCO <sub>3</sub> )	26	0	88.7	98.4	104	108	110	112	121	107	6.46
Alkalinity (mg/L as CaCO <sub>3</sub> )	40	0	105	107	109	110	114	119	131	112	5.31
Langelier saturation index (standard units)	37	0	-0.6	-0.35	-0.11	0.03	0.1	0.3	0.4	0	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	41	0	248	264	282	288	298	312	384	291	23.4
Calcium (mg/L as Ca)	30	0	23.3	27.6	29.9	31	32.9	35.5	42	31.3	3.45
Calcium (mg/L as CaCO <sub>3</sub> )	37	0	69.9	75.6	78	80.3	85.3	98	104	82.5	7.65
Magnesium (mg/L as Mg)	28	0	4.95	6.34	6.75	7.01	7.37	7.71	8.51	7.01	0.68
Sodium (mg/L as Na)	30	0	30.3	33.8	38.1	39.8	41.5	46	52	39.8	4.56
Potassium (mg/L as K)	28	0	4.25	5.54	5.8	5.96	6.41	6.88	7.52	6.06	0.64
Bicarbonate (mg/L as HCO <sub>3</sub> )	41	0	104	106	108	109	113	121	145	112	7.59
Carbonate (mg/L as CO <sub>3</sub> )	41	26	<1	<1	<1	<1	1.1	1.4	2.1	1.13	0.27
Sulfate (mg/L as SO <sub>4</sub> )	41	0	27.3	32.3	33.4	34.4	35.1	35.4	45.9	34.2	2.6
Chloride (mg/L as Cl)	41	0	21.6	33	33.9	36.1	39.3	42.2	63.1	37	5.98
Fluoride (mg/L as F)	40	0	0.44	0.54	0.58	0.63	0.67	0.71	1	0.63	0.09
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	21	0	49.3	57.9	58.9	64.5	67.6	76	77.4	64.6	7.23
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	18	0	0.08	0.13	0.17	0.18	0.2	0.31	0.31	0.19	0.06
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	18	17	<40	<40	<40	<40	<40	<40	54	41	3
Antimony (µg/L as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic (µg/L as As)	41	0	8	13	14	15	17	19	23	15	3
Barium (µg/L as Ba)	18	0	92	103	111	118	124	135	179	119	18
Beryllium (µg/L as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	13	1	<50	90	101	134	150	178	183	129	38
Cadmium (µg/L as Cd)	9	8	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium (µg/L as Cr)	9	2	<1	--	1	2	2	--	4	2	1
Copper (µg/L as Cu)	18	15	<5	<5	<5	<5	<5	8	10	5	1
Iron (µg/L as Fe)	30	16	<10	<10	<10	<10	15	37	129	20	26
Lead (µg/L as Pb)	40	34	<2	<2	<2	<2	<2	3	17	3	3
Lithium (mg/L as Li)	4	0	0.08	--	0.08	0.08	0.08	--	0.08	0.08	0
Manganese (µg/L as Mn)	30	28	<2	<2	<2	<2	<2	<2	3	2	0
Nickel (µg/L as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (µg/L as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver (µg/L as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	18	0	251	282	306	332	352	377	383	329	37
Vanadium (µg/L as V)	14	7	<10	<10	<10	11	13	15	31	13	5
Zinc (µg/L as Zn)	18	9	<5	<5	<5	<5	8	11	16	7	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.13	1.14	1.02	0.05

**Table 6.--Construction information and summary statistics for water-quality data for Burton 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°04'21"	Well capacity (gal/min): 2,320	Ground elevation (ft asl): 5,284
Longitude: 106°36'11"	Cased depth (ft bls): 857	Static water level (ft bls): 425
Date drilled: 1962	Screened interval (ft bls): 425-845	Static water level date: 1/26/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	20	0	290	317	387	397	405	408	428	384	37.3
pH, field (standard units)	20	0	7.43	7.52	7.57	7.7	7.83	7.91	8.08	7.71	0.17
pH, lab (standard units)	20	0	7.4	7.59	7.81	7.87	7.96	8	8.04	7.83	0.16
Eh, field (mV)	18	0	100	143	154	175	202	403	680	215	133
Temperature, field (deg C)	20	0	20.3	20.6	20.8	20.85	20.9	21.1	24.8	21	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	20	0	99	123	129	131	134	136	137	130	8.21
Alkalinity (mg/L as $\text{CaCO}_3$ )	20	0	98.1	104	107	108	111	115	118	109	4.39
Langelier saturation index (standard units)	20	0	-0.42	-0.26	-0.21	-0.05	0.02	0.17	0.26	-0.07	0.17
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	19	0	240	240	256	268	276	280	292	267	13.2
Calcium (mg/L as Ca)	20	0	30.6	32	38.2	39.3	42.2	44.2	46	39.5	4.16
Calcium (mg/L as $\text{CaCO}_3$ )	20	0	88.2	95.3	102	104	109	112	118	104	6.8
Magnesium (mg/L as Mg)	20	0	4.95	5.86	7.17	7.58	7.82	8.45	9.13	7.39	0.97
Sodium (mg/L as Na)	21	0	16.3	21.1	25	26.3	27.1	27.8	32.6	25.6	3.69
Potassium (mg/L as K)	20	0	2.16	3.15	4.11	4.24	4.5	5.06	5.48	4.18	0.74
Bicarbonate (mg/L as $\text{HCO}_3$ )	20	0	97.5	103	106	107	110	114	117	108	4.25
Carbonate (mg/L as $\text{CO}_3$ )	20	17	<1	<1	<1	<1	<1	1.04	1.1	1.01	0.03
Sulfate (mg/L as $\text{SO}_4$ )	20	0	29.1	32.2	34.6	36.4	37.9	40.7	41.5	36.2	3.06
Chloride (mg/L as Cl)	20	0	16.6	19.2	29.6	31.1	33.2	35.8	41.3	30.2	5.94
Fluoride (mg/L as F)	20	0	0.43	0.46	0.47	0.51	0.54	0.61	0.62	0.51	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	17	0	35.5	43.1	50.5	51.5	54.8	60.3	60.9	51.6	6.3
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	14	0	0.17	0.23	0.28	0.41	0.45	0.47	0.5	0.37	0.1
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	12	12	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	21	0	3	3	4	4	4	5	5	4	1
Barium ( $\mu\text{g/L}$ as Ba)	12	0	86	104	111	121	133	143	161	122	19
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	1	<50	84	87	119	125	134	163	110	31
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	1	--	1	1	2	--	3	2	1
Copper ( $\mu\text{g/L}$ as Cu)	12	11	<5	<5	<5	<5	<5	<5	6	5	0
Iron ( $\mu\text{g/L}$ as Fe)	21	14	<10	<10	<10	<10	10	14	32	12	6
Lead ( $\mu\text{g/L}$ as Pb)	20	20	<2	<2	<2	<2	<2	<2	<2	<2	0
Lithium (mg/L as Li)	1	0	0.09	--	--	0.09	--	--	0.09	0.09	--
Manganese ( $\mu\text{g/L}$ as Mn)	21	21	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel ( $\mu\text{g/L}$ as Ni)	10	10	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	2	1	<2	--	--	3	--	--	3	3	1
Strontium ( $\mu\text{g/L}$ as Sr)	12	0	219	314	327	352	403	411	467	359	63
Vanadium ( $\mu\text{g/L}$ as V)	9	7	<10	--	<10	<10	<10	--	23	12	4
Zinc ( $\mu\text{g/L}$ as Zn)	12	6	<5	<5	<5	8	29	109	283	42	81
<b>Carbon</b>											
Total organic carbon (mg/L as C)	11	9	<1	<1	<1	<1	<1	1.34	2	1.12	0.31

**Table 7.--Construction information and summary statistics for water-quality data for Burton 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'39"	Well capacity (gal/min): 2,180	Ground elevation (ft asl): 5,215
Longitude: 106°35'59"	Cased depth (ft bls): 994	Static water level (ft bls): 360
Date drilled: 1962	Screened interval (ft bls): 358-994	Static water level date: 3/19/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	30	0	300	321	370	391	404	411	450	383	37.3
pH, field (standard units)	31	0	7.18	7.29	7.44	7.7	7.83	8	8.2	7.67	0.27
pH, lab (standard units)	21	0	7.04	7.6	7.81	7.92	7.96	8.01	8.32	7.85	0.25
Eh, field (mV)	20	0	115	130	148	170	201	262	360	182	58
Temperature, field (deg C)	31	0	19.9	20.2	20.4	20.6	20.8	21	24	20.7	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	19	0	127	128	132	134	139	145	154	135	6.27
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	87.2	100	104	107	111	115	133	108	8.28
Langelier saturation index (standard units)	28	0	-0.6	-0.46	-0.3	-0.06	0.06	0.2	0.3	-0.1	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	230	256	264	272	280	302	316	273	17.1
Calcium (mg/L as Ca)	24	0	32	36.4	39.3	42.7	45.7	47.3	47.5	42.1	4.12
Calcium (mg/L as $\text{CaCO}_3$ )	27	0	83.7	100	105	108	114	118	128	109	8.61
Magnesium (mg/L as Mg)	22	0	6.97	7.22	7.32	7.77	7.95	8.71	9.77	7.86	0.7
Sodium (mg/L as Na)	24	0	19	23.2	25.1	26	27.9	31.7	36.2	26.7	3.58
Potassium (mg/L as K)	22	0	3.3	3.66	3.84	4.08	4.28	4.67	7.31	4.21	0.78
Bicarbonate (mg/L as $\text{HCO}_3$ )	31	0	86.3	99.4	103	105	110	114	133	107	8.41
Carbonate (mg/L as $\text{CO}_3$ )	31	23	<1	<1	<1	<1	1	1.56	2.21	1.12	0.29
Sulfate (mg/L as $\text{SO}_4$ )	31	0	34.9	37.7	39.3	41.9	45.6	46.4	56.2	42.5	4.76
Chloride (mg/L as Cl)	31	0	23.8	28.8	29.4	30.5	32.4	35.9	46.6	31.3	4.11
Fluoride (mg/L as F)	31	0	0.34	0.45	0.47	0.51	0.55	0.58	0.69	0.51	0.07
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	17	0	40.5	45.6	48	49.7	52.6	59.6	64.2	50.4	5.43
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	16	0	0.18	0.25	0.36	0.42	0.51	0.78	0.8	0.45	0.17
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	15	15	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	32	0	3	4	4	5	5	6	7	5	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	97	104	107	115	119	136	150	116	13
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	2	<50	<50	74	92	135	145	154	96	35
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	9	6	<0.1	--	<0.1	<0.1	0.1	--	0.3	0.1	0.1
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	9	6	<1	--	<1	<1	1	--	1	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	8	<5	<5	<5	<5	7	9	56	9	13
Iron ( $\mu\text{g}/\text{L}$ as Fe)	24	14	<10	<10	<10	<10	16	70	3440	161	699
Lead ( $\mu\text{g}/\text{L}$ as Pb)	31	24	<2	<2	<2	<2	<2	4	6	2	1
Lithium (mg/L as Li)	3	0	0.03	--	--	0.03	--	--	0.03	0.03	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	24	15	<2	<2	<2	<2	2	3	28	3	5
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	303	319	332	359	388	389	522	365	50
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	10	<10	<10	<10	<10	<10	12	20	11	3
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	9	<5	<5	<5	<5	7	14	17	7	4
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	10	<1	<1	<1	<1	1.21	1.63	1.69	1.13	0.24

**Table 8.--Construction information and summary statistics for water-quality data for Burton 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'43"	Well capacity (gal/min): 2,910	Ground elevation (ft asl): 5,275
Longitude: 106°36'34"	Cased depth (ft bls): 1,276	Static water level (ft bls): 440
Date drilled: 1987	Screened interval (ft bls): 636-1,276	Static water level date: 3/27/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	34	0	310	369	413	440	448	453	464	426	37
pH, field (standard units)	34	0	7.45	7.59	7.76	7.86	7.92	8.1	8.18	7.84	0.17
pH, lab (standard units)	24	0	7.53	7.7	7.92	7.99	8.07	8.1	8.2	7.96	0.16
Eh, field (mV)	23	0	97	122	143	169	235	348	403	198	86
Temperature, field (deg C)	34	0	24	25.3	26.1	26.2	26.2	26.4	26.8	26.1	0.5
Hardness (mg/L as $\text{CaCO}_3$ )	24	0	78	90.6	96	99.4	102	108	118	99.3	8.04
Alkalinity (mg/L as $\text{CaCO}_3$ )	35	0	101	109	111	113	118	122	131	115	6.17
Langelier saturation index (standard units)	30	0	-0.38	-0.29	-0.12	-0.01	0.1	0.26	0.33	-0.01	0.19
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	35	0	256	285	300	308	314	320	345	305	16.4
Calcium (mg/L as Ca)	28	0	22.9	24.3	26.8	28.4	29.8	31.7	32.7	28.2	2.46
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	52.1	67.5	72	74	78.5	81.8	101	74.1	8.39
Magnesium (mg/L as Mg)	26	0	5.35	6.02	6.24	6.58	6.64	6.93	7.86	6.51	0.47
Sodium (mg/L as Na)	28	0	41.2	43.6	46.7	48.2	50.7	58	66.5	49.1	5.17
Potassium (mg/L as K)	26	0	5.88	6.18	6.39	6.75	7.08	7.58	8.36	6.81	0.57
Bicarbonate (mg/L as $\text{HCO}_3$ )	35	0	99.8	109	110	112	116	121	131	114	6.2
Carbonate (mg/L as $\text{CO}_3$ )	35	14	<1	<1	<1	1	1.2	1.41	1.64	1.14	0.18
Sulfate (mg/L as $\text{SO}_4$ )	35	0	23	29.4	34.7	35.8	36.5	36.8	37.2	34.8	3.07
Chloride (mg/L as Cl)	35	1	<4	39.2	40.5	41.6	44	45.6	55	41.4	7.26
Fluoride (mg/L as F)	35	0	0.6	0.63	0.68	0.71	0.77	0.83	0.92	0.72	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	19	0	59.4	62.9	67.1	70.2	73.6	76.5	95.8	70.8	7.46
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	16	0	0.1	0.16	0.22	0.24	0.25	0.33	0.36	0.24	0.06
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	35	0	7	16	19	21	21	23	26	20	3
Barium ( $\mu\text{g/L}$ as Ba)	17	0	92	94	98	102	105	113	132	103	9
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	93	137	143	155	172	185	186	154	25
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	1	<1	--	1	1	2	--	4	2	1
Copper ( $\mu\text{g/L}$ as Cu)	17	11	<5	<5	<5	<5	5	7	9	5	1
Iron ( $\mu\text{g/L}$ as Fe)	28	18	<10	<10	<10	<10	12	21	60	14	10
Lead ( $\mu\text{g/L}$ as Pb)	34	26	<2	<2	<2	<2	<2	8	47	5	10
Lithium (mg/L as Li)	4	0	0.02	--	0.06	0.1	0.11	--	0.11	0.08	0.04
Manganese ( $\mu\text{g/L}$ as Mn)	28	23	<2	<2	<2	<2	<2	2	5	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	270	272	284	297	315	347	388	306	30
Vanadium ( $\mu\text{g/L}$ as V)	13	2	<10	<10	12	14	16	24	37	16	8
Zinc ( $\mu\text{g/L}$ as Zn)	17	8	<5	<5	<5	7	11	26	66	12	15
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	11	<1	<1	<1	<1	1.04	1.34	1.35	1.06	0.13

**Table 9.--Construction information and summary statistics for water-quality data for Burton 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'55"	Well capacity (gal/min): 3,050	Ground elevation (ft asl): 5,276
Longitude: 106°35'15"	Cased depth (ft bls): 1,170	Static water level (ft bls): 415.10
Date drilled: 1991	Screened interval (ft bls): 550-1,170	Static water level date: 12/5/96

**Summary statistics (data from 1992 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	17	0	303	330	368	374	376	401	404	368	25
pH, field (standard units)	17	0	7.23	7.47	7.7	7.77	7.81	7.91	7.95	7.72	0.17
pH, lab (standard units)	17	0	7.57	7.82	7.89	7.95	7.97	8	8.02	7.91	0.11
Eh, field (mV)	16	0	92	93	140	165	242	380	385	192	89
Temperature, field (deg C)	17	0	21.7	22.1	22.2	22.3	22.4	23.3	24.2	22.5	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	17	0	100	120	123	126	131	142	146	127	9.84
Alkalinity (mg/L as $\text{CaCO}_3$ )	17	0	102	104	106	106	109	112	112	107	2.9
Langelier saturation index (standard units)	17	0	-0.47	-0.31	-0.08	-0.03	0.03	0.16	0.21	-0.05	0.16
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	16	0	236	240	242	250	258	268	272	251	10.9
Calcium (mg/L as Ca)	17	0	34.1	34.6	36.4	36.9	38.1	41.5	43.6	37.3	2.39
Calcium (mg/L as $\text{CaCO}_3$ )	17	0	80.8	90	94	97.5	102	108	119	98.5	8.57
Magnesium (mg/L as Mg)	17	0	6.44	6.84	7.12	7.43	7.75	9.76	9.89	7.65	0.92
Sodium (mg/L as Na)	17	0	19.7	21.6	23.5	24.2	26.1	28.8	29.7	24.5	2.4
Potassium (mg/L as K)	17	0	3.56	3.62	4.26	4.46	4.82	6.52	6.57	4.65	0.85
Bicarbonate (mg/L as $\text{HCO}_3$ )	17	0	101	103	105	105	108	111	111	106	2.87
Carbonate (mg/L as $\text{CO}_3$ )	17	16	<1	<1	<1	<1	<1	<1	1.03	1	0.01
Sulfate (mg/L as $\text{SO}_4$ )	17	0	27.4	27.4	28.5	28.9	29.3	29.7	30.3	28.8	0.79
Chloride (mg/L as Cl)	17	0	29.4	29.7	30.4	31.4	32.2	36.9	38.5	32.3	2.73
Fluoride (mg/L as F)	17	0	0.42	0.43	0.46	0.48	0.53	0.61	0.64	0.5	0.07
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	16	0	44.2	46.4	48.3	51.6	53.9	56.6	58	51.3	3.84
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	15	13	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.06	0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	10	10	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	17	0	4	4	6	6	7	8	10	6	2
Barium ( $\mu\text{g/L}$ as Ba)	10	0	114	116	122	129	146	162	173	136	18
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	10	0	72	75	84	99	116	126	132	100	19
Cadmium ( $\mu\text{g/L}$ as Cd)	9	9	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	6	<1	--	<1	<1	1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	10	8	<5	<5	<5	<5	<5	11	17	6	4
Iron ( $\mu\text{g/L}$ as Fe)	17	10	<10	<10	<10	<10	11	17	21	12	3
Lead ( $\mu\text{g/L}$ as Pb)	17	15	<2	<2	<2	<2	<2	2	8	2	1
Lithium (mg/L as Li)	--	--	--	--	--	--	--	--	--	--	--
Manganese ( $\mu\text{g/L}$ as Mn)	17	13	<2	<2	<2	<2	<2	3	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	9	9	<5	--	<5	<5	<5	--	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	--	--	--	--	--	--	--	--	--	--	--
Strontium ( $\mu\text{g/L}$ as Sr)	10	0	310	312	323	350	402	453	481	366	55
Vanadium ( $\mu\text{g/L}$ as V)	9	7	<10	--	<10	<10	<10	--	18	11	3
Zinc ( $\mu\text{g/L}$ as Zn)	10	8	<5	<5	<5	<5	<5	15	16	7	4
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	8	<1	--	<1	<1	<1	--	1	1	0

**Table 10.--Construction information and summary statistics for water-quality data for Charles Wells 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'28"	Well capacity (gal/min): 3,450	Ground elevation (ft asl): 5,315
Longitude: 106°33'48"	Cased depth (ft bls): 1,056	Static water level (ft bls): 477
Date drilled: 1968	Screened interval (ft bls): 456-1,032	Static water level date: 4/23/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	30	0	200	274	312	346	355	362	372	328	40.4
pH, field (standard units)	30	0	7.08	7.43	7.55	7.8	7.97	8	8.1	7.75	0.25
pH, lab (standard units)	16	0	7.26	7.66	7.89	7.94	8.01	8.1	8.17	7.9	0.21
Eh, field (mV)	15	0	28	110	146	168	210	346	591	202	127
Temperature, field (deg C)	30	0	19	19.35	19.5	19.55	20	21	24	19.9	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	100	102	104	107	109	111	116	107	4.03
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	107	115	117	119	121	129	132	120	5.62
Langelier saturation index (standard units)	28	0	-0.5	-0.33	-0.14	0.05	0.2	0.23	0.4	0	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	32	0	120	200	216	225	232	242	276	223	25.9
Calcium (mg/L as Ca)	19	0	34.9	35.2	36.2	38.1	39.1	43.2	45.1	38.3	2.6
Calcium (mg/L as $\text{CaCO}_3$ )	28	0	89.6	90	95	96.8	105	120	130	101	10.2
Magnesium (mg/L as Mg)	18	0	2.5	2.54	2.92	3.03	3.12	3.28	3.33	2.98	0.22
Sodium (mg/L as Na)	20	0	26.4	28.1	30.4	31.4	33.6	34.6	35.7	31.6	2.5
Potassium (mg/L as K)	18	1	<1	1.47	1.62	2	2.07	2.15	3.27	1.92	0.45
Bicarbonate (mg/L as $\text{CaCO}_3$ )	32	0	106	114	116	118	121	130	156	120	8.75
Carbonate (mg/L as $\text{CaCO}_3$ )	32	15	<1	<1	<1	1.04	1.4	1.76	2.23	1.25	0.37
Sulfate (mg/L as $\text{SO}_4$ )	32	0	20	25.4	30.2	31.3	31.7	32.8	45.4	30.6	4.19
Chloride (mg/L as Cl)	32	0	14.1	16	16.7	18	21.9	24.9	43.7	20.1	5.6
Fluoride (mg/L as F)	30	0	0.32	0.44	0.49	0.51	0.55	0.66	0.77	0.52	0.09
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	24.9	26.2	26.3	26.8	30.1	30.2	31.9	28	2.21
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	8	0	0.19	--	0.21	0.25	0.28	--	0.52	0.27	0.11
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	32	31	<2	<2	<2	<2	<2	<2	5	2	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	17	0	114	120	131	136	148	154	228	142	25
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	7	<1	--	<1	<1	<1	--	1	1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	2	<50	<50	83	94	111	120	148	95	28
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	4	<0.1	--	<0.1	<0.1	0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	1	<1	--	1	2	2	--	3	2	1
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	13	<5	<5	<5	<5	<5	20	69	10	16
Iron ( $\mu\text{g}/\text{L}$ as Fe)	20	12	<10	<10	<10	<10	16	65	730	53	160
Lead ( $\mu\text{g}/\text{L}$ as Pb)	31	23	<2	<2	<2	<2	2	5	10	3	2
Lithium (mg/L as Li)	4	0	0.01	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	19	18	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	138	158	169	185	204	214	232	186	23
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	9	<5	<5	<5	<5	6	33	64	12	15
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	12	<1	<1	<1	<1	1.05	1.45	1.58	1.1	0.2

**Table 11.--Construction information and summary statistics for water-quality data for Charles Wells 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'05"	Well capacity (gal/min): 3,240	Ground elevation (ft asl): 5,262
Longitude: 106°34'15"	Cased depth (ft bls): 1,020	Static water level (ft bls): 411.18
Date drilled: 1968	Screened interval (ft bls): 432-996	Static water level date: 1/26/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	30	0	190	220	280	314	327	331	335	294	43.9
pH, field (standard units)	30	0	7.42	7.54	7.65	7.76	7.9	8.05	8.4	7.78	0.22
pH, lab (standard units)	16	0	7.27	7.77	7.85	7.94	8.01	8.08	8.18	7.9	0.2
Eh, field (mV)	12	0	114	129	151	191	281	379	573	235	132
Temperature, field (deg C)	29	0	18.6	18.9	18.9	19	19.8	21	23	19.5	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	91.5	106	110	115	117	123	124	113	7.72
Alkalinity (mg/L as $\text{CaCO}_3$ )	30	0	97.9	107	110	111	120	122	126	113	6.34
Langelier saturation index (standard units)	27	0	-0.37	-0.2	-0.18	-0.05	0.1	0.2	0.7	0	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	170	190	196	212	220	224	228	209	14.5
Calcium (mg/L as Ca)	17	0	32	33	37.9	39.9	40.3	43.2	44.5	39.1	3.22
Calcium (mg/L as $\text{CaCO}_3$ )	28	0	89	95.2	100	102	104	113	128	103	7.4
Magnesium (mg/L as Mg)	16	0	1.95	3.13	3.39	3.48	3.81	3.93	4.03	3.48	0.49
Sodium (mg/L as Na)	18	0	12.8	18.3	21.4	21.8	23.3	24.9	25.2	21.7	2.9
Potassium (mg/L as K)	16	1	<1	1.49	1.64	1.85	1.96	2.02	2.11	1.78	0.27
Bicarbonate (mg/L as $\text{CaCO}_3$ )	31	0	97.3	106	109	110	120	121	141	113	8.15
Carbonate (mg/L as $\text{CaCO}_3$ )	31	20	<1	<1	<1	<1	1.17	1.39	2.32	1.15	0.31
Sulfate (mg/L as $\text{SO}_4$ )	31	0	27.8	31.8	33.3	34.4	35.4	35.7	47.4	34.2	3.2
Chloride (mg/L as Cl)	31	0	6.01	9.81	11	11.5	12	12.1	13.7	11.2	1.55
Fluoride (mg/L as F)	30	0	0.4	0.48	0.49	0.53	0.55	0.59	0.63	0.53	0.05
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	25.2	26.4	26.5	29	35.6	35.9	37.3	30.6	4.34
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	1	<0.05	--	0.33	0.36	0.44	--	0.45	0.35	0.12
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	15	13	<40	<40	<40	<40	<40	50	102	45	16
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	31	30	<2	<2	<2	<2	<2	<2	2	2	0
Barium ( $\mu\text{g/L}$ as Ba)	15	0	42	80	84	88	96	102	143	90	20
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	5	<50	<50	<50	52	69	70	82	59	11
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	15	9	<5	<5	<5	<5	8	15	26	8	6
Iron ( $\mu\text{g/L}$ as Fe)	18	9	<10	<10	<10	13	35	39	57	20	14
Lead ( $\mu\text{g/L}$ as Pb)	30	26	<2	<2	<2	<2	<2	4	64	4	11
Lithium (mg/L as Li)	2	1	<0.01	--	--	0.01	--	--	0.01	0.01	0
Manganese ( $\mu\text{g/L}$ as Mn)	18	15	<2	<2	<2	<2	<2	2	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	13	13	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	5	5	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	15	0	95	188	190	207	224	239	247	204	36
Vanadium ( $\mu\text{g/L}$ as V)	11	10	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	15	7	<5	<5	<5	5	9	33	81	13	20
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	13	<1	<1	<1	<1	<1	<1	1.81	1.06	0.22

**Table 12.--Construction information and summary statistics for water-quality data for Charles Wells 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'40"	Well capacity (gal/min): 2,960	Ground elevation (ft asl): 5,275
Longitude: 106°34'27"	Cased depth (ft bls): 1,020	Static water level (ft bls): 405
Date drilled: 1968	Screened interval (ft bls): 420-996	Static water level date: 5/27/90

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	32	0	200	260	290	305	309	315	330	292	31.2
pH, field (standard units)	32	0	7.07	7.44	7.66	7.83	8	8.1	8.3	7.8	0.28
pH, lab (standard units)	18	0	7.22	7.7	7.86	7.92	7.99	8.08	8.14	7.88	0.2
Eh, field (mV)	17	0	38	107	151	171	187	260	311	170	61
Temperature, field (deg C)	33	0	16.9	18	18.4	18.4	18.6	19	20	18.5	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	98.7	106	109	112	115	119	129	112	6.61
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	103	105	106	108	111	117	120	109	4.61
Langelier saturation index (standard units)	29	0	-0.77	-0.4	-0.15	-0.02	0.2	0.34	0.5	-0.02	0.3
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	155	170	188	203	208	212	220	197	17.5
Calcium (mg/L as Ca)	21	0	34.3	34.6	37.6	39.4	40.6	42.1	45	39	2.89
Calcium (mg/L as $\text{CaCO}_3$ )	29	0	90	94	96	98	102	114	126	100	7.65
Magnesium (mg/L as Mg)	19	0	2.71	2.98	3.18	3.58	3.67	3.86	4.26	3.5	0.36
Sodium (mg/L as Na)	21	0	15.4	16.2	19.1	19.7	20.5	21.6	23.3	19.6	2.04
Potassium (mg/L as K)	19	1	<1	1.41	1.56	1.84	2.03	2.1	2.23	1.78	0.3
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	101	104	105	107	112	118	141	109	7.44
Carbonate (mg/L as $\text{CaCO}_3$ )	34	23	<1	<1	<1	<1	1.05	1.5	1.96	1.12	0.23
Sulfate (mg/L as $\text{SO}_4$ )	34	0	24.7	27.2	29.6	30.7	31.8	33.9	35.9	30.5	2.54
Chloride (mg/L as Cl)	34	0	4.25	8.07	8.7	9.49	9.99	10.9	13.2	9.28	1.71
Fluoride (mg/L as F)	32	0	0.36	0.48	0.5	0.54	0.58	0.63	0.99	0.55	0.11
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	27.9	29.3	30.1	33.1	33.5	34.4	35.4	32	2.3
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.16	--	0.44	0.49	0.51	--	0.69	0.46	0.14
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	34	12	<2	<2	<2	2	3	3	4	2	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	62	66	78	82	89	99	125	84	14
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	5	<50	<50	<50	54	66	68	269	74	62
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	11	<5	<5	<5	<5	6	8	12	6	2
Iron ( $\mu\text{g/L}$ as Fe)	21	14	<10	<10	<10	<10	12	36	147	21	31
Lead ( $\mu\text{g/L}$ as Pb)	33	28	<2	<2	<2	<2	<2	2	2	2	0
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	21	18	<2	<2	<2	<2	<2	2	6	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	131	141	184	192	206	219	257	190	29
Vanadium ( $\mu\text{g/L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	17	6	<5	<5	<5	7	13	25	29	11	7
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	11	<1	<1	<1	<1	1.21	1.52	1.92	1.14	0.28

**Table 13.--Construction Information and summary statistics for water-quality data for Charles Wells 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°06'02"	Well capacity (gal/min): 3,610	Ground elevation (ft asl): 5,324
Longitude: 106°33'31"	Cased depth (ft bls): 1,056	Static water level (ft bls): 478.78
Date drilled: 1968	Screened interval (ft bls): 456-1,032	Static water level date: 12/4/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	28	0	240	323	358	393	401	411	424	375	42.6
pH, field (standard units)	29	0	7.1	7.33	7.59	7.72	7.83	8	8.1	7.71	0.23
pH, lab (standard units)	17	0	7.42	7.69	7.8	7.89	7.94	8.02	8.02	7.85	0.15
Eh, field (mV)	15	0	100	105	121	162	175	217	541	177	106
Temperature, field (deg C)	29	0	18.9	20.2	20.5	20.6	20.7	21	23	20.6	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	119	121	123	124	128	131	142	126	5.49
Alkalinity (mg/L as $\text{CaCO}_3$ )	29	0	118	120	120	121	127	133	135	124	5.24
Langelier saturation index (standard units)	26	0	-0.5	-0.34	0	0.05	0.2	0.34	0.4	0.05	0.22
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	30	0	192	221	232	243	248	252	265	239	14.6
Calcium (mg/L as Ca)	19	0	36.1	38.3	43.9	45.3	47.6	48.6	49.7	45	3.62
Calcium (mg/L as $\text{CaCO}_3$ )	26	0	106	109	110	114	120	128	144	117	9.12
Magnesium (mg/L as Mg)	17	0	2.83	2.93	3.38	3.5	3.6	3.67	3.7	3.44	0.25
Sodium (mg/L as Na)	19	0	25.8	26.2	29.6	31.9	33.6	37.3	38.5	31.6	3.53
Potassium (mg/L as K)	17	1	<1	1.36	1.83	1.96	2.14	2.18	2.41	1.91	0.33
Bicarbonate (mg/L as $\text{CaCO}_3$ )	30	0	118	119	119	121	130	133	144	124	6.55
Carbonate (mg/L as $\text{CaCO}_3$ )	30	22	<1	<1	<1	<1	1	1.36	2.25	1.1	0.26
Sulfate (mg/L as $\text{SO}_4$ )	29	0	22	22.3	26	26.8	27.6	28.7	30	26.4	1.97
Chloride (mg/L as Cl)	30	0	24.6	29	30.9	32.8	35	42.7	61.6	34.4	6.74
Fluoride (mg/L as F)	30	0	0.3	0.34	0.34	0.38	0.42	0.44	0.52	0.39	0.05
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	10	0	23.3	24	26	26.6	27.5	31.4	33	27	2.68
<b>Nutrients</b>											
Nitrite (mg/L as N)	7	7	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	8	0	0.18	--	0.21	0.24	0.26	--	0.3	0.24	0.04
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	16	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	30	29	<2	<2	<2	<2	<2	<2	4	2	0
Barium ( $\mu\text{g/L}$ as Ba)	16	0	132	135	168	176	180	186	244	173	25
Beryllium ( $\mu\text{g/L}$ as Be)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	2	<50	<50	51	81	96	96	191	84	39
Cadmium ( $\mu\text{g/L}$ as Cd)	7	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	7	0	2	--	2	2	3	--	3	2	1
Copper ( $\mu\text{g/L}$ as Cu)	16	11	<5	<5	<5	<5	6	21	43	9	10
Iron ( $\mu\text{g/L}$ as Fe)	19	13	<10	<10	<10	<10	11	21	60	13	12
Lead ( $\mu\text{g/L}$ as Pb)	29	26	<2	<2	<2	<2	<2	3	14	3	2
Lithium (mg/L as Li)	4	0	0.01	--	0.01	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	19	18	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	14	13	<5	<5	<5	<5	<5	<5	15	6	3
Selenium ( $\mu\text{g/L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	201	209	251	270	286	303	309	265	31
Vanadium ( $\mu\text{g/L}$ as V)	12	11	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	16	11	<5	<5	<5	<5	6	8	59	9	13
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	11	<1	<1	<1	<1	<1	1.48	1.87	1.12	0.26

**Table 14.--Construction information and summary statistics for water-quality data for Charles Wells 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'15"	Well capacity (gal/min): 2,970	Ground elevation (ft asl): 5,222
Longitude: 106°34'60"	Cased depth (ft bls): 1,400	Static water level (ft bls): 357.62
Date drilled: 1989	Screened interval (ft bls): 625-1,385	Static water level date: 1/12/98

**Summary statistics (data from 1990 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	17	0	275	300	322	337	355	417	425	344	38.2
pH, field (standard units)	17	0	7.3	7.4	7.6	7.75	7.83	8.09	8.27	7.74	0.24
pH, lab (standard units)	16	0	7.14	7.21	7.77	7.9	7.95	7.99	7.99	7.79	0.26
Eh, field (mV)	15	0	69	112	141	182	247	433	610	219	137
Temperature, field (deg C)	17	0	17.6	18.5	19.3	19.4	19.5	19.8	20.3	19.3	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	108	109	112	116	121	125	136	117	7.12
Alkalinity (mg/L as $\text{CaCO}_3$ )	17	0	99.2	102	105	105	107	111	118	106	3.99
Langelier saturation index (standard units)	16	0	-0.54	-0.39	-0.21	-0.05	0.07	0.23	0.46	-0.07	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	17	0	204	216	220	224	248	264	300	236	23.9
Calcium (mg/L as Ca)	17	0	35.5	37.9	39.9	40.5	43.3	47	49.4	41.6	3.26
Calcium (mg/L as $\text{CaCO}_3$ )	16	0	90.1	96	97.6	100	105	112	136	103	10.2
Magnesium (mg/L as Mg)	17	0	3.42	3.89	4	4.27	4.49	4.64	5.25	4.26	0.41
Sodium (mg/L as Na)	17	0	18.7	22.4	23.5	24.2	24.8	28.2	32.8	24.5	2.84
Potassium (mg/L as K)	17	0	1.87	2.19	2.41	2.53	2.7	3.01	3.06	2.55	0.32
Bicarbonate (mg/L as $\text{CaCO}_3$ )	17	0	98.7	101	104	105	107	110	117	105	4.01
Carbonate (mg/L as $\text{CaCO}_3$ )	17	17	<1	<1	<1	<1	<1	<1	<1	<1	0
Sulfate (mg/L as $\text{SO}_4$ )	17	0	23.8	23.8	28.3	28.9	30.7	32.7	35.5	29.1	3.03
Chloride (mg/L as Cl)	17	0	14.5	17	18.6	19.9	25	29.3	41.2	22.5	6.34
Fluoride (mg/L as F)	17	0	0.47	0.48	0.5	0.54	0.56	0.62	0.67	0.55	0.05
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	34	34.5	35.9	40.4	41.7	42.1	44.3	39.3	3.4
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	2	<0.05	--	0.06	0.1	0.16	--	0.23	0.11	0.06
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	13	13	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	17	1	<2	3	4	4	5	6	9	4	2
Barium ( $\mu\text{g}/\text{L}$ as Ba)	13	0	79	89	93	99	105	115	120	100	11
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	3	<50	<50	52	67	83	89	114	71	19
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	4	<1	--	<1	<1	1	--	2	1	1
Copper ( $\mu\text{g}/\text{L}$ as Cu)	13	10	<5	<5	<5	<5	<5	6	9	5	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	17	11	<10	<10	<10	<10	13	59	954	71	228
Lead ( $\mu\text{g}/\text{L}$ as Pb)	17	14	<2	<2	<2	<2	<2	4	5	2	1
Lithium (mg/L as Li)	3	0	0.03	--	--	0.03	--	--	0.06	0.04	0.02
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	17	13	<2	<2	<2	<2	<2	3	6	2	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	11	11	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	3	3	<2	--	--	<2	--	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	13	0	204	250	259	293	341	368	415	299	58
Vanadium ( $\mu\text{g}/\text{L}$ as V)	11	10	<10	<10	<10	<10	<10	<10	11	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	13	3	<5	<5	6	9	15	436	615	89	197
<b>Carbon</b>											
Total organic carbon (mg/L as C)	12	11	<1	<1	<1	<1	<1	<1	1.93	1.08	0.27

**Table 15.--Construction information and summary statistics for water-quality data for College 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'46"	Well capacity (gal/min): 1,680	Ground elevation (ft asl): 5,336
Longitude: 106°44'33"	Cased depth (ft bls): 1,662	Static water level (ft bls): 434.80
Date drilled: 1978	Screened interval (ft bls): 660-1,650	Static water level date: 2/19/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	128	0	261	390	445	484	490	493	528	463	48.5
pH, field (standard units)	130	0	7.9	8.43	8.52	8.65	8.8	8.89	9.4	8.65	0.21
pH, lab (standard units)	74	0	7.81	8.55	8.64	8.69	8.73	8.78	10.2	8.69	0.22
Eh, field (mV)	94	0	55	83	95	144	207	286	607	173	109
Temperature, field (deg C)	130	0	14	27	27.6	28	28.2	28.3	32.2	27.6	2
Hardness (mg/L as $\text{CaCO}_3$ )	64	0	9.9	11	12	12.4	16	18	20.2	13.7	2.69
Alkalinity (mg/L as $\text{CaCO}_3$ )	101	0	153	159	162	164	166	172	183	165	5.42
Langelier saturation index (standard units)	101	0	-0.5	-0.08	0.03	0.13	0.3	0.41	1.3	0.17	0.27
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	102	0	240	295	312	324	336	356	392	324	23.8
Calcium (mg/L as Ca)	70	0	2.61	3.23	3.41	3.6	3.77	3.95	5.37	3.62	0.38
Calcium (mg/L as $\text{CaCO}_3$ )	100	0	5.18	8.5	10	10.4	12	14	20.1	11	2.33
Magnesium (mg/L as Mg)	69	0	0.26	0.36	0.4	0.41	0.42	0.46	0.5	0.41	0.04
Sodium (mg/L as Na)	71	0	48.9	93.8	99.9	104	109	114	133	104	11.5
Potassium (mg/L as K)	69	17	<1	<1	1	1.12	1.21	1.29	1.48	1.13	0.12
Bicarbonate (mg/L as $\text{CaCO}_3$ )	103	0	148	152	154	156	159	164	176	157	5.76
Carbonate (mg/L as $\text{CaCO}_3$ )	102	0	1.42	4.63	6	7.17	7.96	9.13	11.6	6.85	1.97
Sulfate (mg/L as $\text{SO}_4$ )	104	0	43.6	51.3	54.1	55.3	56.6	57.7	61.9	54.6	3.47
Chloride (mg/L as Cl)	105	3	<4	4.98	5.18	5.52	6.1	6.49	9.8	5.73	0.91
Fluoride (mg/L as F)	102	0	0.19	1.36	1.44	1.5	1.54	1.6	1.72	1.47	0.16
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	62	0	19.5	25.9	27	28.7	30.6	32	33.2	28.7	2.59
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	53	0	2.02	2.65	2.86	2.91	2.98	3.14	3.47	2.9	0.24
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	154	46	27
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	137	0	34	44	46	49	51	54	79	49	6
Barium ( $\mu\text{g/L}$ as Ba)	18	0	27	28	32	34	34	41	63	34	8
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	245	268	276	317	330	349	357	307	35
Cadmium ( $\mu\text{g/L}$ as Cd)	9	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	0	7	--	8	9	9	--	9	8	1
Copper ( $\mu\text{g/L}$ as Cu)	18	12	<5	<5	<5	<5	5	15	19	7	4
Iron ( $\mu\text{g/L}$ as Fe)	72	34	<10	<10	<10	11	33	52	104	24	21
Lead ( $\mu\text{g/L}$ as Pb)	108	96	<2	<2	<2	<2	<2	2	21	3	3
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.04	0.04	--	0.05	0.04	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	72	50	<2	<2	<2	<2	3	6	10	3	2
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	52	54	56	64	67	70	81	63	7
Vanadium ( $\mu\text{g/L}$ as V)	14	0	85	87	94	99	104	104	120	99	9
Zinc ( $\mu\text{g/L}$ as Zn)	18	10	<5	<5	<5	<5	8	16	104	12	23
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	12	<1	<1	<1	<1	1	1.3	1.42	1.06	0.13

**Table 16.--Construction information and summary statistics for water-quality data for College 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'46"	Well capacity (gal/min): 2,070	Ground elevation (ft asl): 5,228
Longitude: 106°44'00"	Cased depth (ft bls): 1,575	Static water level (ft bls): 334.50
Date drilled: 1978	Screened interval (ft bls): 550-1,564	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	124	0	280	360	440	477	483	495	680	457	59
pH, field (standard units)	125	0	8.11	8.46	8.6	8.84	8.97	9.09	9.47	8.79	0.26
pH, lab (standard units)	86	0	8.1	8.51	8.76	8.92	9	9.05	9.12	8.84	0.22
Eh, field (mV)	80	0	51	94	129	162	193	295	639	190	124
Temperature, field (deg C)	124	0	17	26	27.8	31	32	32.2	33	29.7	3
Hardness (mg/L as $\text{CaCO}_3$ )	68	0	8.1	10	10.9	12.3	18.1	20.6	30	14.7	4.93
Alkalinity (mg/L as $\text{CaCO}_3$ )	123	0	115	148	150	153	158	163	175	154	7.55
Langelier saturation index (standard units)	121	0	-0.4	0	0.16	0.33	0.48	0.63	0.99	0.32	0.27
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	124	0	255	288	305	319	328	340	396	317	23.9
Calcium (mg/L as Ca)	73	0	2.34	2.64	2.8	3.2	4.72	5.99	6.61	3.8	1.29
Calcium (mg/L as $\text{CaCO}_3$ )	118	0	6	8	8.23	10.1	14	17.7	32.2	11.7	4.12
Magnesium (mg/L as Mg)	71	0	0.23	0.31	0.34	0.41	0.69	1.02	1.26	0.55	0.28
Sodium (mg/L as Na)	73	0	48.8	90	96.6	100	104	106	123	99	10.1
Potassium (mg/L as K)	71	35	<1	<1	<1	1	1.26	1.61	1.92	1.16	0.25
Bicarbonate (mg/L as $\text{CaCO}_3$ )	125	0	113	135	137	143	150	154	172	144	9.6
Carbonate (mg/L as $\text{CaCO}_3$ )	125	1	<1	3.65	7.18	10.9	13.2	14.5	16.7	9.98	4.15
Sulfate (mg/L as $\text{SO}_4$ )	123	0	43.2	55.4	57.1	59.7	61.6	62.9	68.6	58.9	4.39
Chloride (mg/L as Cl)	126	1	<4	5.5	5.8	6.24	6.64	7.34	19	6.54	1.8
Fluoride (mg/L as F)	120	0	0.96	1.04	1.09	1.14	1.23	1.33	1.48	1.16	0.1
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	64	0	24.2	26.6	28.3	30.1	31.7	33.4	35.9	29.9	2.61
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	54	0	1.94	2.15	2.22	2.33	2.56	2.71	3	2.38	0.24
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	15	<40	<40	<40	<40	<40	69	111	46	18
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	130	0	12	28	30	33	34	37	50	32	4
Barium ( $\mu\text{g/L}$ as Ba)	17	0	16	18	20	27	33	38	46	28	9
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	220	230	260	285	303	305	330	279	32
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	9	--	9	10	11	--	12	10	1
Copper ( $\mu\text{g/L}$ as Cu)	17	12	<5	<5	<5	<5	5	13	20	7	4
Iron ( $\mu\text{g/L}$ as Fe)	74	64	<10	<10	<10	<10	<10	12	136	14	17
Lead ( $\mu\text{g/L}$ as Pb)	125	111	<2	<2	<2	<2	<2	2	49	3	5
Lithium (mg/L as Li)	4	0	0.04	--	0.04	0.04	0.05	--	0.05	0.04	0
Manganese ( $\mu\text{g/L}$ as Mn)	74	69	<2	<2	<2	<2	<2	<2	10	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	57	67	70	93	102	117	124	89	19
Vanadium ( $\mu\text{g/L}$ as V)	13	0	48	49	58	73	84	87	89	70	15
Zinc ( $\mu\text{g/L}$ as Zn)	17	10	<5	<5	<5	<5	7	18	147	15	34
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	14	<1	<1	<1	<1	<1	1.06	1.38	1.03	0.1

**Table 17.--Construction information and summary statistics for water-quality data for Coronado 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°10'24"	Well capacity (gal/min): 2,480	Ground elevation (ft asl): 5,289
Longitude: 106°34'19"	Cased depth (ft bls): 1,194	Static water level (ft bls): 387.50
Date drilled: 1974	Screened interval (ft bls): 479-1,184	Static water level date: 12/18/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	102	0	380	494	549	573	585	592	601	557	43.1
pH, field (standard units)	101	0	7	7.51	7.77	7.88	7.99	8.11	8.4	7.86	0.23
pH, lab (standard units)	86	0	7.14	7.74	7.91	8.01	8.06	8.12	8.44	7.96	0.19
Eh, field (mV)	80	0	0.03	82	121	174	205	303	673	187	118
Temperature, field (deg C)	103	0	14.7	22	22.7	22.8	22.9	23	25.2	22.6	1
Hardness (mg/L as $\text{CaCO}_3$ )	68	0	75	100	102	106	109	114	131	106	7.13
Alkalinity (mg/L as $\text{CaCO}_3$ )	102	0	90.9	115	117	119	122	126	131	119	5.15
Langelier saturation index (standard units)	98	0	-2.1	-0.4	-0.08	0.03	0.13	0.3	0.99	0	0.36
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	102	0	305	344	352	361	372	376	432	363	18.2
Calcium (mg/L as Ca)	73	0	16.7	26.7	28.8	30.2	30.9	32.1	36.8	29.5	2.85
Calcium (mg/L as $\text{CaCO}_3$ )	98	0	53.6	72	74.8	78.1	82.2	88.4	103	79.2	8.01
Magnesium (mg/L as Mg)	70	0	3.78	6.67	6.89	7.32	7.67	8.01	9.01	7.25	0.74
Sodium (mg/L as Na)	73	0	33.3	60.9	67.2	71.5	74.7	77.6	92.7	70	8.91
Potassium (mg/L as K)	70	0	3.05	5.4	5.78	6.2	6.43	6.73	7.68	6.1	0.64
Bicarbonate (mg/L as $\text{CaCO}_3$ )	103	0	90	114	116	118	121	125	135	118	5.39
Carbonate (mg/L as $\text{CaCO}_3$ )	103	33	<1	<1	<1	1.17	1.31	1.5	3.1	1.22	0.32
Sulfate (mg/L as $\text{SO}_4$ )	101	0	29.3	34.7	39.1	40.5	41.2	43.4	45.3	39.8	3.19
Chloride (mg/L as Cl)	101	0	21.4	67.5	71.3	75.6	78.7	82.5	94.5	74.2	9.44
Fluoride (mg/L as F)	102	0	0.68	0.84	0.88	0.93	0.99	1.04	1.2	0.94	0.08
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	62	0	31.7	52.4	56.4	59.3	63.1	64.3	76.9	58.8	6.34
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	48	0	0.27	0.32	0.36	0.38	0.42	0.59	0.64	0.4	0.09
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	19	17	<40	<40	<40	<40	<40	52	80	43	9
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	105	0	17	24	26	28	29	33	38	28	3
Barium ( $\mu\text{g/L}$ as Ba)	19	0	79	80	81	90	98	127	173	95	22
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	159	161	200	228	241	253	263	216	35
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	4	--	5	5	6	--	12	6	2
Copper ( $\mu\text{g/L}$ as Cu)	19	13	<5	<5	<5	<5	7	21	36	8	8
Iron ( $\mu\text{g/L}$ as Fe)	74	40	<10	<10	<10	<10	19	49	273	23	36
Lead ( $\mu\text{g/L}$ as Pb)	102	80	<2	<2	<2	<2	<2	3	42	3	5
Lithium (mg/L as Li)	6	0	0.14	--	0.16	0.19	0.21	--	0.25	0.19	0.04
Manganese ( $\mu\text{g/L}$ as Mn)	74	68	<2	<2	<2	<2	<2	<2	26	3	3
Nickel ( $\mu\text{g/L}$ as Ni)	17	17	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	19	0	233	269	272	301	338	344	358	302	35
Vanadium ( $\mu\text{g/L}$ as V)	14	0	15	16	17	20	22	25	41	21	6
Zinc ( $\mu\text{g/L}$ as Zn)	19	10	<5	<5	<5	<5	14	25	42	11	10
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	15	<1	<1	<1	<1	<1	1.05	1.07	1.01	0.02

**Table 18.--Construction information and summary statistics for water-quality data for Coronado 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°10'07"	Well capacity (gal/min): 2,560	Ground elevation (ft asl): 5.242
Longitude: 106°34'39"	Cased depth (ft bls): 1,390	Static water level (ft bls): 330.05
Date drilled: 1991	Screened interval (ft bls): 590-1,390	Static water level date: 12/18/98

**Summary statistics (data from 1993 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	47	0	321	399	446	451	456	461	570	444	34.9
pH, field (standard units)	48	0	7.44	7.58	7.68	7.76	7.85	7.92	8.19	7.75	0.14
pH, lab (standard units)	47	0	7.75	7.85	7.94	7.99	8.04	8.09	8.14	7.98	0.08
Eh, field (mV)	47	0	-5	79	122	159	222	400	647	204	143
Temperature, field (deg C)	48	0	18.1	19.9	20.6	20.8	20.8	20.9	22.6	20.6	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	47	0	106	107	109	110	114	123	152	113	9.33
Alkalinity (mg/L as $\text{CaCO}_3$ )	47	0	111	133	136	139	141	144	146	138	6.15
Langelier saturation index (standard units)	47	0	-0.36	-0.22	-0.1	-0.02	0.1	0.13	0.38	-0.02	0.14
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	47	0	244	280	292	300	304	316	364	298	19.5
Calcium (mg/L as Ca)	48	0	27.2	28.4	30.2	31.6	33	35.8	39.9	31.9	2.75
Calcium (mg/L as $\text{CaCO}_3$ )	47	0	68.8	78	79.8	82.7	87.8	98.5	114	85	8.66
Magnesium (mg/L as Mg)	48	0	6.83	7.16	7.37	7.84	8.23	8.54	9.45	7.86	0.58
Sodium (mg/L as Na)	48	0	19.8	41.4	44.9	49.2	50.5	53	55	47	6.85
Potassium (mg/L as K)	48	0	3.61	4.62	4.94	5.31	5.59	5.78	6.61	5.24	0.55
Bicarbonate (mg/L as $\text{CaCO}_3$ )	47	0	110	132	134	137	139	143	145	136	6.07
Carbonate (mg/L as $\text{CaCO}_3$ )	47	9	<1	<1	1.03	1.24	1.44	1.55	1.83	1.26	0.22
Sulfate (mg/L as $\text{SO}_4$ )	47	0	40.8	46.3	47.1	48.2	49	50.7	51.7	48.1	2.01
Chloride (mg/L as Cl)	47	0	12.6	21.7	23.4	24.6	25.3	25.9	28	23.7	2.9
Fluoride (mg/L as F)	46	0	0.51	0.7	0.75	0.79	0.84	0.9	0.95	0.79	0.09
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	48	0	32.9	45.4	49.4	52.3	55.6	58.7	60.7	51.9	5.71
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	47	13	<0.05	<0.05	<0.05	0.13	0.24	0.41	0.45	0.17	0.12
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	9	9	<40	--	<40	<40	<40	--	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	48	0	8	12	14	16	17	18	21	15	3
Barium ( $\mu\text{g/L}$ as Ba)	9	0	64	--	69	75	77	--	95	75	9
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	9	0	67	--	152	168	182	--	191	150	46
Cadmium ( $\mu\text{g/L}$ as Cd)	9	9	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	2	<1	--	1	1	2	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	9	6	<5	--	<5	<5	5	--	10	6	2
Iron ( $\mu\text{g/L}$ as Fe)	48	22	<10	<10	<10	11	16	28	176	18	26
Lead ( $\mu\text{g/L}$ as Pb)	48	42	<2	<2	<2	<2	<2	3	13	3	2
Lithium (mg/L as Li)	--	--	--	--	--	--	--	--	--	--	--
Manganese ( $\mu\text{g/L}$ as Mn)	48	38	<2	<2	<2	<2	<2	3	18	3	3
Nickel ( $\mu\text{g/L}$ as Ni)	9	9	<5	--	<5	<5	<5	--	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	--	--	--	--	--	--	--	--	--	--	--
Strontium ( $\mu\text{g/L}$ as Sr)	9	0	261	--	305	344	351	--	470	344	62
Vanadium ( $\mu\text{g/L}$ as V)	9	3	<10	--	<10	11	13	--	18	12	3
Zinc ( $\mu\text{g/L}$ as Zn)	9	5	<5	--	<5	<5	7	--	27	9	8
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	5	<1	--	<1	<1	1.17	--	1.76	1.13	0.25

**Table 19.--Construction information and summary statistics for water-quality data for Duranes 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'41"	Well capacity (gal/min): 2,060	Ground elevation (ft asl): 4,960
Longitude: 106°40'06"	Cased depth (ft bls): 924	Static water level (ft bls): 34.15
Date drilled: 1959	Screened interval (ft bls): 204-924	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	37	0	352	460	561	584	618	715	730	579	88.9
pH, field (standard units)	36	0	7	7.2	7.38	7.52	7.65	7.9	8.3	7.54	0.28
pH, lab (standard units)	21	0	7.08	7.46	7.6	7.7	7.78	7.84	7.9	7.66	0.2
Eh, field (mV)	21	0	6	74	119	155	190	245	480	166	106
Temperature, field (deg C)	36	0	17	18.8	20	20.3	20.55	21.7	23	20.2	1.1
Hardness (mg/L as $\text{CaCO}_3$ )	19	0	134	137	139	141	162	202	211	154	25.3
Alkalinity (mg/L as $\text{CaCO}_3$ )	36	0	107	142	147	152	164	176	190	155	15.5
Langelier saturation index (standard units)	33	0	-0.67	-0.36	-0.2	-0.11	0.09	0.39	0.7	-0.06	0.29
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	36	0	350	375	400	409	428	496	516	419	41.3
Calcium (mg/L as Ca)	23	0	33	35.1	38.5	41.2	45.5	57.1	59.2	43.1	7.69
Calcium (mg/L as $\text{CaCO}_3$ )	33	0	95.2	99.7	103	106	118	154	186	117	23
Magnesium (mg/L as Mg)	22	0	7.51	7.75	8.6	9.41	11.1	12.8	13.6	9.87	1.91
Sodium (mg/L as Na)	23	0	54.1	56.2	59.9	67.8	70.2	71.2	85	66.1	7.1
Potassium (mg/L as K)	22	0	7.12	7.43	8.01	9.22	9.6	11.5	12.5	9.26	1.47
Bicarbonate (mg/L as $\text{CaCO}_3$ )	36	0	133	141	145	152	163	175	189	155	13.7
Carbonate (mg/L as $\text{CaCO}_3$ )	35	25	<1	<1	<1	<1	1.12	1.72	2.1	1.17	0.34
Sulfate (mg/L as $\text{SO}_4$ )	34	0	89.3	103	109	115	119	136	179	117	17.3
Chloride (mg/L as Cl)	36	0	8.37	15.8	16.7	17.5	18.7	24.5	38.9	18.7	5.55
Fluoride (mg/L as F)	35	0	0.38	0.56	0.61	0.67	0.7	0.76	1.18	0.68	0.15
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	15	0	53.8	54.7	59.4	66	68.3	69.8	78.1	64.3	6.28
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	13	4	<0.05	<0.05	<0.05	0.13	0.24	0.44	0.47	0.18	0.15
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	16	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	37	0	8	10	13	15	17	18	22	15	3
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	44	46	54	59	63	69	91	60	11
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	0	94	117	118	132	136	140	158	128	16
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	5	<1	--	<1	<1	1	--	1	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	14	<5	<5	<5	<5	<5	6	9	5	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	24	14	<10	<10	<10	<10	12	16	23	12	3
Lead ( $\mu\text{g}/\text{L}$ as Pb)	36	34	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	5	0	0.02	--	0.12	0.14	0.15	--	0.16	0.12	0.06
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	24	0	7	9	10	11	14	16	24	12	4
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	4	<2	--	<2	<2	2	--	2	2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	514	527	583	652	756	884	1090	686	147
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	2	<10	<10	15	20	21	23	24	18	5
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	11	<5	<5	<5	<5	6	7	8	5	1
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	4	<1	<1	<1	1.4	2.02	2.44	2.64	1.56	0.56

**Table 20.--Construction information and summary statistics for water-quality data for Duranes 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°07'11"	Well capacity (gal/min): 2,120	Ground elevation (ft asl): 4,970
Longitude: 106°40'47"	Cased depth (ft bls): 804	Static water level (ft bls): 22.11
Date drilled: 1958	Screened interval (ft bls): 180-804	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	28	0	240	310	369	418	422	429	440	387	57
pH, field (standard units)	29	0	7.16	7.22	7.65	7.88	7.98	8.1	8.27	7.77	0.3
pH, lab (standard units)	17	0	7.71	7.77	7.95	8.04	8.09	8.15	8.16	8.01	0.13
Eh, field (mV)	17	0	72	76	122	166	187	328	418	180	91
Temperature, field (deg C)	29	0	17	18.9	19	19.1	19.3	19.5	21	19.1	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	17	0	75.5	81.2	90	92	94.3	95.9	126	92.7	10
Alkalinity (mg/L as $\text{CaCO}_3$ )	30	0	120	120	122	125	128	135	139	126	5.21
Langelier saturation index (standard units)	26	0	-0.67	-0.57	-0.27	-0.01	0.2	0.3	0.5	-0.06	0.32
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	29	0	260	275	288	304	310	316	328	298	15.7
Calcium (mg/L as Ca)	20	0	22.2	23.3	24.5	27.6	29.1	31.8	36.9	27.5	3.56
Calcium (mg/L as $\text{CaCO}_3$ )	26	0	62.1	67.7	70	73.3	76.1	89	98	75.2	8.6
Magnesium (mg/L as Mg)	19	0	4.31	4.39	5.02	5.64	6.02	6.46	8.02	5.61	0.83
Sodium (mg/L as Na)	21	0	36.6	41	43.4	49	51.7	53	55.5	47.6	5.33
Potassium (mg/L as K)	19	0	4.76	5.3	5.69	6.58	6.9	7.28	8.16	6.37	0.83
Bicarbonate (mg/L as $\text{CaCO}_3$ )	30	0	119	119	121	124	127	134	156	125	7.46
Carbonate (mg/L as $\text{CaCO}_3$ )	30	8	<1	<1	<1	1.28	1.53	1.89	2.87	1.39	0.44
Sulfate (mg/L as $\text{SO}_4$ )	30	0	53	59.3	66.4	67.5	68.3	70.4	87.6	67	5.91
Chloride (mg/L as Cl)	30	0	5.19	9.21	10.1	10.5	10.8	11.4	11.9	10.3	1.19
Fluoride (mg/L as F)	30	0	0.5	0.56	0.61	0.65	0.67	0.72	1.01	0.65	0.09
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	51.2	56.6	60.1	63.6	67.1	67.7	70.7	62.8	5.38
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	54	41	3
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	30	0	6	6	7	8	8	9	10	8	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	35	36	44	54	57	73	73	52	11
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	58	59	77	99	108	119	120	93	21
Cadmium ( $\mu\text{g/L}$ as Cd)	8	3	<0.1	--	<0.1	0.1	0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	3	<1	--	<1	1	1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	16	<5	<5	<5	<5	<5	<5	5	5	0
Iron ( $\mu\text{g/L}$ as Fe)	21	15	<10	<10	<10	<10	10	12	16	11	1
Lead ( $\mu\text{g/L}$ as Pb)	29	27	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	5	0	0.06	--	0.07	0.07	0.08	--	0.09	0.07	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	21	6	<2	<2	<2	3	3	3	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	14	<5	<5	<5	<5	<5	<5	6	5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	5	<2	1
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	251	275	335	379	420	431	569	375	73
Vanadium ( $\mu\text{g/L}$ as V)	13	1	<10	10	12	14	16	21	24	14	4
Zinc ( $\mu\text{g/L}$ as Zn)	17	15	<5	<5	<5	<5	<5	6	6	5	0
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	10	<1	<1	<1	<1	1.24	1.83	2.2	1.2	0.37

**Table 21.--Construction information and summary statistics for water-quality data for Duranes 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'30"	Well capacity (gal/min): 2,480	Ground elevation (ft asl): 4,962
Longitude: 106°40'43"	Cased depth (ft bls): 950	Static water level (ft bls): 23.72
Date drilled: 1953	Screened interval (ft bls): 132-950	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	21	0	297	447	452	505	515	540	573	489	55.7
pH, field (standard units)	22	0	7.1	7.38	7.56	7.67	7.77	8	8	7.66	0.22
pH, lab (standard units)	16	0	7.31	7.34	7.65	7.81	7.89	7.93	8	7.74	0.2
Eh, field (mV)	14	0	21	28	125	154	167	349	378	169	105
Temperature, field (deg C)	22	0	16.7	17.8	18.8	19	19.1	19.8	23.3	19.1	1.5
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	92.8	118	125	131	134	134	153	128	12
Alkalinity (mg/L as $\text{CaCO}_3$ )	23	0	140	142	143	148	152	163	190	151	11.2
Langelier saturation index (standard units)	19	0	-0.69	-0.34	-0.17	-0.02	0.08	0.23	0.3	-0.06	0.22
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	22	0	296	328	348	356	360	368	372	351	16.9
Calcium (mg/L as Ca)	19	0	27.8	33.7	36.3	39.5	42.2	43.3	44.4	38.8	4.08
Calcium (mg/L as $\text{CaCO}_3$ )	19	0	90	92	97	101	108	121	143	104	12
Magnesium (mg/L as Mg)	17	0	6.69	6.75	7.23	8.04	8.61	8.91	9.28	7.94	0.78
Sodium (mg/L as Na)	19	0	37.9	42.8	46.8	54.2	58.4	60.7	64.3	52.7	6.8
Potassium (mg/L as K)	17	0	5.83	6.28	6.69	7.36	7.7	8.15	8.52	7.28	0.71
Bicarbonate (mg/L as $\text{CaCO}_3$ )	22	0	139	141	143	148	151	162	189	150	11.4
Carbonate (mg/L as $\text{CaCO}_3$ )	23	13	<1	<1	<1	<1	1.11	1.39	2.45	1.13	0.32
Sulfate (mg/L as $\text{SO}_4$ )	23	0	71.3	73.8	83.4	88.2	89.3	91.4	107	86.4	7.65
Chloride (mg/L as Cl)	23	0	11.7	12	12.2	12.7	13.4	14.3	15.9	12.9	1.01
Fluoride (mg/L as F)	22	0	0.45	0.5	0.52	0.56	0.6	0.65	0.72	0.57	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	54.5	55.7	58.2	62.4	63.5	64.8	67.1	61.1	3.9
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	15	15	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	23	0	5	6	6	6	7	8	9	6	1
Barium ( $\mu\text{g/L}$ as Ba)	15	0	38	41	46	51	58	61	68	52	8
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	63	75	95	126	134	142	142	114	27
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	2	<1	--	<1	1	2	--	3	2	1
Copper ( $\mu\text{g/L}$ as Cu)	15	8	<5	<5	<5	<5	8	10	15	7	3
Iron ( $\mu\text{g/L}$ as Fe)	19	3	<10	<10	11	15	25	104	289	36	65
Lead ( $\mu\text{g/L}$ as Pb)	22	20	<2	<2	<2	<2	<2	<2	8	2	1
Lithium (mg/L as Li)	3	0	0.07	--	--	0.08	--	--	0.09	0.08	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	19	0	19	89	101	114	119	125	128	107	24
Nickel ( $\mu\text{g/L}$ as Ni)	13	12	<5	<5	<5	<5	<5	<5	18	6	4
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	5	5	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	15	0	414	419	435	504	548	593	604	501	62
Vanadium ( $\mu\text{g/L}$ as V)	11	1	<10	11	11	12	14	16	16	12	2
Zinc ( $\mu\text{g/L}$ as Zn)	15	5	<5	<5	<5	6	12	26	79	13	19
<b>Carbon</b>											
Total organic carbon (mg/L as C)	13	2	<1	<1	1.03	1.18	1.73	1.97	2.2	1.38	0.41

**Table 22.--Construction information and summary statistics for water-quality data for Duranes 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu$ S/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu$ g/L, micrograms per liter]

**Construction information**

Latitude: 35°06'28"	Well capacity (gal/min): 1,470	Ground elevation (ft asl): 4,960
Longitude: 106°41'15"	Cased depth (ft bls): 950	Static water level (ft bls): 13.75
Date drilled: 1953	Screened interval (ft bls): 144-950	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu$ S/cm)	26	0	208	360	410	441	449	457	459	422	52.1
pH, field (standard units)	27	0	7.27	7.48	7.8	7.97	8.07	8.3	8.39	7.92	0.27
pH, lab (standard units)	20	0	7.57	7.89	8.01	8.09	8.12	8.18	8.23	8.05	0.15
Eh, field (mV)	17	0	102	116	128	171	194	283	637	196	122
Temperature, field (deg C)	27	0	19.1	19.4	19.5	19.6	20	20.5	21	19.8	0.4
Hardness (mg/L as CaCO <sub>3</sub> )	20	0	50.7	62.8	66.4	67.2	69.7	76.3	81.4	67.9	6.12
Alkalinity (mg/L as CaCO <sub>3</sub> )	28	0	124	125	126	127	131	140	144	129	5.67
Langelier saturation index (standard units)	25	0	-0.8	-0.53	-0.17	-0.01	0.05	0.19	0.4	-0.09	0.28
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	28	0	258	285	307	317	326	332	345	314	18.9
Calcium (mg/L as Ca)	23	0	15.1	17.8	19.6	20.4	21.3	22.7	24.3	20.4	2.05
Calcium (mg/L as CaCO <sub>3</sub> )	24	0	46.7	49.8	50.3	53.1	55.6	60	66	53.7	4.36
Magnesium (mg/L as Mg)	21	0	3.47	3.69	3.82	3.99	4.31	4.49	4.66	4.08	0.34
Sodium (mg/L as Na)	23	0	44.8	56.1	62.5	67.4	72.1	74.9	77.8	66.5	7.79
Potassium (mg/L as K)	21	0	5.4	5.75	6.15	6.47	6.73	7.1	7.51	6.45	0.55
Bicarbonate (mg/L as CaCO <sub>3</sub> )	28	0	122	124	124	126	129	138	143	128	5.86
Carbonate (mg/L as CaCO <sub>3</sub> )	28	5	<1	<1	1.13	1.43	1.63	2.01	2.4	1.44	0.39
Sulfate (mg/L as SO <sub>4</sub> )	28	0	53.6	58	68.8	70.8	74.7	76.7	78.2	70	6.36
Chloride (mg/L as Cl)	28	0	8.48	10.6	12	12.4	14.3	15.2	19.2	13	2.19
Fluoride (mg/L as F)	28	0	0.84	0.91	0.98	1.03	1.08	1.18	1.44	1.04	0.12
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	15	0	50	55.1	61.7	63.6	66.8	67.5	71.2	63	5.15
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	13	8	<0.05	<0.05	<0.05	<0.05	0.09	0.1	0.22	0.08	0.05
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu$ g/L as Al)	16	15	<40	<40	<40	<40	<40	<40	83	43	11
Antimony ( $\mu$ g/L as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu$ g/L as As)	28	0	9	11	12	13	14	15	21	13	2
Barium ( $\mu$ g/L as Ba)	16	0	37	37	41	45	49	50	53	44	5
Beryllium ( $\mu$ g/L as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu$ g/L as B)	12	0	69	99	108	124	139	147	182	124	28
Cadmium ( $\mu$ g/L as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu$ g/L as Cr)	8	1	<1	--	1	1	2	--	4	2	1
Copper ( $\mu$ g/L as Cu)	16	11	<5	<5	<5	<5	7	38	39	10	11
Iron ( $\mu$ g/L as Fe)	23	17	<10	<10	<10	<10	11	26	60	14	12
Lead ( $\mu$ g/L as Pb)	27	21	<2	<2	<2	<2	<2	6	32	4	6
Lithium (mg/L as Li)	3	0	0.06	--	--	0.07	--	--	0.07	0.06	0.01
Manganese ( $\mu$ g/L as Mn)	23	16	<2	<2	<2	<2	2	2	3	2	0
Nickel ( $\mu$ g/L as Ni)	14	13	<5	<5	<5	<5	<5	<5	7	5	1
Selenium ( $\mu$ g/L as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu$ g/L as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu$ g/L as Sr)	16	0	268	271	296	319	357	381	382	323	39
Vanadium ( $\mu$ g/L as V)	12	0	17	19	19	21	25	26	31	22	4
Zinc ( $\mu$ g/L as Zn)	16	8	<5	<5	<5	<5	8	18	78	12	18
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	11	<1	<1	<1	<1	1.01	1.5	2.47	1.14	0.39

**Table 23.--Construction information and summary statistics for water-quality data for Duranes 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'06"	Well capacity (gal/min): 1,790	Ground elevation (ft asl): 4,960
Longitude: 106°41'16"	Cased depth (ft bls): 950	Static water level (ft bls): 10.85
Date drilled: 1953	Screened interval (ft bls): 152-950	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	33	0	330	359	397	436	442	445	468	417	34.6
pH, field (standard units)	32	0	7.38	7.56	7.78	7.9	8	8.09	8.44	7.87	0.22
pH, lab (standard units)	22	0	7.54	7.76	7.97	8.06	8.09	8.14	8.25	8.01	0.17
Eh, field (mV)	19	0	71	103	151	172	202	551	565	206	129
Temperature, field (deg C)	33	0	17.9	20	20.3	20.4	20.6	20.6	25	20.4	1
Hardness (mg/L as $\text{CaCO}_3$ )	20	0	75.8	76.2	78.2	79.6	81.8	86.3	89.3	80.3	3.65
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	125	126	128	130	132	141	145	131	5.39
Langelier saturation index (standard units)	30	0	-0.8	-0.4	-0.17	-0.02	0.1	0.2	0.48	-0.06	0.25
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	278	292	304	312	318	324	344	311	14.3
Calcium (mg/L as Ca)	24	0	20.3	21	22.8	23.7	25.5	27	30	24.1	2.41
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	57.5	60	61.3	63	64.8	68.1	80	63.8	4.41
Magnesium (mg/L as Mg)	22	0	3.7	3.95	4.17	4.5	4.87	5.08	5.33	4.51	0.45
Sodium (mg/L as Na)	24	0	43.3	50.1	55.6	60.7	64.2	69.4	71.9	59.4	7.56
Potassium (mg/L as K)	22	0	4.85	5.18	5.49	6.18	6.49	6.87	7.76	6.08	0.74
Bicarbonate (mg/L as $\text{CaCO}_3$ )	33	0	124	125	126	128	131	140	145	130	5.57
Carbonate (mg/L as $\text{CaCO}_3$ )	33	7	<1	<1	1.03	1.4	1.59	1.95	2.58	1.42	0.39
Sulfate (mg/L as $\text{SO}_4$ )	34	0	46.2	54.9	66	67.7	68.8	69.4	92.3	66.1	7.62
Chloride (mg/L as Cl)	34	0	7.71	10.6	11.4	12.2	12.7	13.6	15	12	1.49
Fluoride (mg/L as F)	34	0	0.48	0.88	0.93	0.98	1.05	1.1	1.23	0.98	0.13
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	14	0	52.1	54.6	59.3	63	65.8	67.9	74.5	62.6	5.62
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	12	3	<0.05	<0.05	0.06	0.13	0.34	0.43	0.47	0.19	0.16
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	90	43	12
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	34	0	7	8	9	10	11	12	16	10	2
Barium ( $\mu\text{g/L}$ as Ba)	18	0	31	33	37	43	45	51	56	42	6
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	90	98	119	141	167	176	178	139	30
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	1	<1	--	1	2	2	--	4	2	1
Copper ( $\mu\text{g/L}$ as Cu)	18	16	<5	<5	<5	<5	<5	6	18	6	3
Iron ( $\mu\text{g/L}$ as Fe)	24	12	<10	<10	<10	<10	13	14	521	33	104
Lead ( $\mu\text{g/L}$ as Pb)	33	29	<2	<2	<2	<2	<2	2	3	2	0
Lithium (mg/L as Li)	5	0	0.06	--	0.06	0.06	0.07	--	0.07	0.06	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	24	0	3	3	4	4	5	6	9	4	1
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	272	286	325	353	388	408	410	352	43
Vanadium ( $\mu\text{g/L}$ as V)	14	1	<10	12	16	17	19	26	30	18	5
Zinc ( $\mu\text{g/L}$ as Zn)	18	13	<5	<5	<5	<5	5	10	25	7	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	12	<1	<1	<1	<1	1.02	1.71	2.04	1.14	0.31

**Table 24.--Construction information and summary statistics for water-quality data for Duranes 6**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'53"	Well capacity (gal/min): 1,480	Ground elevation (ft asl): 4,962
Longitude: 106°40'30"	Cased depth (ft bls): 500	Static water level (ft bls): 32.60
Date drilled: 1953	Screened interval (ft bls): 260-500	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	23	0	289	400	430	511	548	550	594	485	76.5
pH, field (standard units)	24	0	6.94	6.97	7.13	7.39	7.54	7.71	7.8	7.36	0.27
pH, lab (standard units)	14	0	7.29	7.4	7.58	7.61	7.68	7.78	7.79	7.6	0.13
Eh, field (mV)	14	0	9	45	76	118	164	245	418	136	101
Temperature, field (deg C)	24	0	18.3	18.5	18.9	19	19.15	20	20.4	19.1	0.5
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	150	173	179	181	184	208	208	182	14
Alkalinity (mg/L as $\text{CaCO}_3$ )	24	0	108	142	163	167	170	175	184	164	15.1
Langelier saturation index (standard units)	21	0	-1.1	-0.49	-0.37	-0.15	-0.05	0.2	0.3	-0.19	0.33
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	25	0	268	325	380	396	400	404	450	380	41
Calcium (mg/L as Ca)	17	0	44.6	49.1	51.8	52.6	54	57.2	57.4	52.8	3.06
Calcium (mg/L as $\text{CaCO}_3$ )	21	0	127	130	133	141	152	174	181	146	17.2
Magnesium (mg/L as Mg)	16	0	9.34	11.3	11.8	12.3	12.8	13.2	14.5	12.2	1.09
Sodium (mg/L as Na)	18	0	34.8	34.8	40.3	42.2	43	44.8	48.9	41.4	3.56
Potassium (mg/L as K)	16	0	8.11	8.86	9.2	9.65	9.89	10.3	11.6	9.61	0.76
Bicarbonate (mg/L as $\text{CaCO}_3$ )	24	0	141	158	162	167	171	177	207	167	12.6
Carbonate (mg/L as $\text{CaCO}_3$ )	25	20	<1	<1	<1	<1	<1	1.25	2.24	1.1	0.31
Sulfate (mg/L as $\text{SO}_4$ )	25	0	72.9	84.5	90.7	93.4	96	104	112	93.2	8.14
Chloride (mg/L as Cl)	25	0	7.08	12.7	13.8	14.4	15.1	16.1	17.4	14.3	1.94
Fluoride (mg/L as F)	25	0	0.27	0.36	0.39	0.41	0.48	0.93	1.21	0.49	0.23
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	10	0	65.9	66.4	67.5	69.5	69.7	73.5	76.6	69.3	2.95
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	40	40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	25	1	<2	3	4	4	5	5	9	4	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	53	53	55	58	64	70	71	60	6
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	2	<50	<50	100	110	123	126	130	103	28
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	5	<1	--	<1	<1	1	--	1	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	15	<5	<5	<5	<5	<5	<5	10	5	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	18	2	<10	<10	13	21	35	43	45	25	13
Lead ( $\mu\text{g}/\text{L}$ as Pb)	24	24	<2	<2	<2	<2	<2	<2	<2	<2	0
Lithium (mg/L as Li)	3	0	0.08	--	--	0.1	--	--	0.11	0.1	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	18	3	<2	<2	3	3	4	5	6	3	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	748	781	847	869	907	942	1150	879	88
Vanadium ( $\mu\text{g}/\text{L}$ as V)	12	7	<10	<10	<10	<10	12	16	16	11	2
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	12	<5	<5	<5	<5	6	19	22	7	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	3	<1	<1	1.02	1.35	1.82	2.39	2.57	1.46	0.51

**Table 25.--Construction information and summary statistics for water-quality data for Duranes 7**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; μS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; μg/L, micrograms per liter]

**Construction information**

Latitude: 35°06'56"	Well capacity (gal/min): 2,010	Ground elevation (ft asl): 4,962
Longitude: 106°41'09"	Cased depth (ft bls): 814	Static water level (ft bls): 13.84
Date drilled: 1953	Screened interval (ft bls): 144-814	Static water level date: 2/10/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (μS/cm)	27	0	213	310	357	429	442	446	460	397	62.2
pH, field (standard units)	28	0	7.01	7.48	7.66	7.77	7.9	8.1	8.27	7.75	0.25
pH, lab (standard units)	18	0	7.74	7.75	7.9	7.97	8.02	8.1	8.18	7.96	0.11
Eh, field (mV)	16	0	97	99	110	138	176	289	294	161	67
Temperature, field (deg C)	27	0	15.1	16.7	17.2	17.7	18	18.3	21	17.6	1
Hardness (mg/L as CaCO <sub>3</sub> )	17	0	70	99.3	103	106	110	112	130	106	11.3
Alkalinity (mg/L as CaCO <sub>3</sub> )	29	0	122	124	126	127	130	136	137	128	4.02
Langelier saturation index (standard units)	24	0	-0.9	-0.4	-0.26	-0.13	0.06	0.3	0.41	-0.12	0.29
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	29	0	180	278	294	300	316	328	346	300	28.5
Calcium (mg/L as Ca)	21	0	21	28.7	31.2	32.4	34.1	37.2	52.1	32.9	6.17
Calcium (mg/L as CaCO <sub>3</sub> )	25	0	73.6	77	79	82	87	96	97	83.7	6.85
Magnesium (mg/L as Mg)	20	0	3.74	5.91	6.12	6.54	7.13	7.63	10.1	6.68	1.17
Sodium (mg/L as Na)	22	0	27.9	33.1	40.5	46.3	50.2	52.3	58.2	44.7	7.82
Potassium (mg/L as K)	20	0	4.07	5.99	6.78	7.01	7.19	8.12	8.84	6.95	0.96
Bicarbonate (mg/L as CaCO <sub>3</sub> )	29	0	120	122	125	126	129	134	136	127	4.1
Carbonate (mg/L as CaCO <sub>3</sub> )	29	11	<1	<1	<1	1.12	1.4	1.82	2.88	1.28	0.43
Sulfate (mg/L as SO <sub>4</sub> )	27	0	58.8	59.8	66.8	69	74.4	76.6	77.7	69.6	5.45
Chloride (mg/L as Cl)	29	0	5.72	9.67	10.4	10.7	11.2	12.7	14.1	10.8	1.4
Fluoride (mg/L as F)	29	0	0.51	0.6	0.68	0.78	0.82	0.89	0.9	0.75	0.11
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	13	0	47.9	54.9	58.2	59.4	63	65.6	66.6	59.7	4.88
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	11	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (μg/L as Al)	17	14	<40	<40	<40	<40	<40	98	141	51	28
Antimony (μg/L as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic (μg/L as As)	29	0	4	6	6	8	8	9	9	7	1
Barium (μg/L as Ba)	17	0	35	43	49	53	56	70	103	55	14
Beryllium (μg/L as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron (μg/L as B)	12	1	<50	77	80	87	106	112	160	94	27
Cadmium (μg/L as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.3	0.1	0.1
Chromium (μg/L as Cr)	8	6	<1	--	<1	<1	1	--	1	1	0
Copper (μg/L as Cu)	17	6	<5	<5	<5	6	20	41	58	15	16
Iron (μg/L as Fe)	22	7	<10	<10	<10	14	20	27	103	20	20
Lead (μg/L as Pb)	28	19	<2	<2	<2	<2	3	5	8	3	2
Lithium (mg/L as Li)	4	0	0.04	--	0.04	0.05	0.05	--	0.06	0.05	0.01
Manganese (μg/L as Mn)	22	0	4	5	6	8	8	10	12	7	2
Nickel (μg/L as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (μg/L as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver (μg/L as Ag)	7	6	<2	--	<2	<2	<2	--	4	2	1
Strontium (μg/L as Sr)	17	0	343	407	454	467	501	530	595	471	57
Vanadium (μg/L as V)	13	3	<10	<10	10	12	16	23	37	15	8
Zinc (μg/L as Zn)	17	7	<5	<5	<5	8	19	22	24	11	7
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	3	<1	<1	1.07	1.24	1.41	1.7	1.98	1.3	0.28

**Table 26.--Construction information and summary statistics for water-quality data for Gonzales 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'42"	Well capacity (gal/min): 1,980	Ground elevation (ft asl): 5,111
Longitude: 106°42'29"	Cased depth (ft bls): 970	Static water level (ft bls): 176.70
Date drilled: 1992	Screened interval (ft bls): 350-950	Static water level date: 12/30/97

**Summary statistics (data from 1993 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	39	0	355	417	443	468	474	483	490	455	31
pH, field (standard units)	39	0	7.99	8.09	8.21	8.26	8.34	8.47	8.66	8.28	0.13
pH, lab (standard units)	39	0	7.97	8.18	8.3	8.36	8.4	8.44	8.48	8.33	0.11
Eh, field (mV)	38	0	32	88	137	185	237	401	676	213	131
Temperature, field (deg C)	39	0	22.1	22.6	23.3	23.7	24	24.2	24.4	23.6	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	38	0	36	38	39.6	40.6	44	50	61.2	42.4	5.06
Alkalinity (mg/L as $\text{CaCO}_3$ )	39	0	120	125	127	130	132	135	139	130	3.98
Langelier saturation index (standard units)	39	0	-0.17	-0.07	0.01	0.11	0.18	0.27	0.44	0.1	0.13
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	39	0	248	300	312	320	328	348	360	319	21.3
Calcium (mg/L as Ca)	39	0	10.5	11.1	11.5	12.3	13.3	15.9	23.9	13.1	2.78
Calcium (mg/L as $\text{CaCO}_3$ )	39	0	16	28.8	30	32	34.4	39.9	51	32.9	5.24
Magnesium (mg/L as Mg)	39	0	2.08	2.13	2.24	2.37	2.53	3.2	5.13	2.57	0.62
Sodium (mg/L as Na)	39	0	62.5	70.2	77.7	83.3	86.4	89.2	99.8	81.5	7.71
Potassium (mg/L as K)	39	0	3.72	4.18	4.52	4.76	4.97	5.99	7.26	4.86	0.73
Bicarbonate (mg/L as $\text{CaCO}_3$ )	39	0	118	122	125	126	129	133	138	127	3.96
Carbonate (mg/L as $\text{CaCO}_3$ )	39	0	1.1	1.74	2.42	2.82	3.02	3.23	3.59	2.61	0.58
Sulfate (mg/L as $\text{SO}_4$ )	38	0	68.3	69.7	73.8	77.1	78.8	84.7	90	76.8	4.97
Chloride (mg/L as Cl)	38	0	4.38	8.91	9.49	9.93	10.5	11.1	12.2	9.9	1.23
Fluoride (mg/L as F)	39	0	1.05	1.07	1.1	1.15	1.18	1.23	1.28	1.15	0.06
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	39	0	41.4	45.4	47.7	50.6	55.5	59.7	70.8	51.8	6
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	38	0	0.78	0.96	1.14	1.27	1.33	1.36	1.46	1.23	0.15
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	9	9	<40	--	<40	<40	<40	--	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	39	0	13	19	22	23	25	27	32	23	3
Barium ( $\mu\text{g}/\text{L}$ as Ba)	9	0	30	--	32	36	41	--	50	37	6
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	9	0	153	--	191	228	235	--	256	213	37
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	9	8	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	9	0	3	--	5	6	8	--	9	6	2
Copper ( $\mu\text{g}/\text{L}$ as Cu)	9	7	<5	--	<5	<5	<5	--	23	7	6
Iron ( $\mu\text{g}/\text{L}$ as Fe)	39	31	<10	<10	<10	<10	<10	20	48	13	8
Lead ( $\mu\text{g}/\text{L}$ as Pb)	39	35	<2	<2	<2	<2	<2	3	6	2	1
Lithium (mg/L as Li)	--	--	--	--	--	--	--	--	--	--	--
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	39	34	<2	<2	<2	<2	<2	3	15	2	2
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	9	9	<5	--	<5	<5	<5	--	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	--	--	--	--	--	--	--	--	--	--	--
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	9	0	183	--	212	240	284	--	457	267	84
Vanadium ( $\mu\text{g}/\text{L}$ as V)	9	0	21	--	39	41	44	--	49	40	8
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	9	4	<5	--	<5	5	9	--	20	8	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	8	<1	--	<1	<1	<1	--	1.63	1.07	0.21

**Table 27.--Construction information and summary statistics for water-quality data for Gonzales 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'35"	Well capacity (gal/min): 2,480	Ground elevation (ft asl): 5,100
Longitude: 106°41'50"	Cased depth (ft bls): 1,115	Static water level (ft bls): 152.28
Date drilled: 1989	Screened interval (ft bls): 400-1,100	Static water level date: 12/30/97

**Summary statistics (data from 1992 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	31	0	373	410	421	432	436	438	440	426	15.5
pH, field (standard units)	31	0	7.46	7.67	7.81	7.89	7.98	8.04	8.27	7.89	0.17
pH, lab (standard units)	31	0	7.8	7.96	8.03	8.07	8.16	8.24	8.29	8.08	0.11
Eh, field (mV)	28	0	61	125	145	165	256	696	750	247	192
Temperature, field (deg C)	31	0	22.9	24.7	25	25.3	25.5	25.6	25.6	25.1	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	31	0	67.7	69.6	70	72	75	79	86	73.3	4.18
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	123	128	128	130	132	134	138	131	2.98
Langelier saturation index (standard units)	31	0	-0.87	-0.29	-0.14	-0.01	0.1	0.15	0.37	-0.04	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	292	300	304	308	320	324	328	311	9.55
Calcium (mg/L as Ca)	31	0	10.6	19.6	21.3	22.2	23.5	24.5	27.4	21.9	3.07
Calcium (mg/L as $\text{CaCO}_3$ )	31	0	38.6	52	55.4	56.3	59	60.1	78	57	5.83
Magnesium (mg/L as Mg)	31	0	2.12	3.88	4.03	4.19	4.37	4.69	5.3	4.13	0.61
Sodium (mg/L as Na)	31	0	30.8	54.7	58	62.1	65.2	69.1	77.4	61.4	8.14
Potassium (mg/L as K)	31	0	3.55	5.52	6.3	6.85	7.27	7.62	8.68	6.64	1.13
Bicarbonate (mg/L as $\text{CaCO}_3$ )	31	0	122	126	127	129	131	133	135	129	2.8
Carbonate (mg/L as $\text{CaCO}_3$ )	31	2	<1	1.14	1.29	1.42	1.76	2.09	2.48	1.53	0.37
Sulfate (mg/L as $\text{SO}_4$ )	31	0	48.6	57.2	60.9	63.5	65.2	65.9	73.8	62.2	5.2
Chloride (mg/L as Cl)	31	0	5.65	9.57	9.74	10	10.2	10.5	11.9	9.94	0.94
Fluoride (mg/L as F)	31	0	0.91	0.94	0.96	0.98	1.05	1.07	1.12	1	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	29	0	38.5	58.4	64.4	68.8	72.7	76.9	86.1	68.1	9.04
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	27	0	0.22	0.26	0.29	0.32	0.39	0.57	0.6	0.35	0.1
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	10	9	<40	<40	<40	<40	<40	41	41	40	0
Antimony ( $\mu\text{g/L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	31	0	9	11	11	13	14	16	22	13	2
Barium ( $\mu\text{g/L}$ as Ba)	10	0	28	34	43	48	52	55	55	46	8
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	10	0	99	111	145	160	192	236	272	168	48
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	3	--	3	4	5	--	9	4	2
Copper ( $\mu\text{g/L}$ as Cu)	10	7	<5	<5	<5	<5	5	11	13	6	3
Iron ( $\mu\text{g/L}$ as Fe)	31	26	<10	<10	<10	<10	<10	17	45	13	8
Lead ( $\mu\text{g/L}$ as Pb)	31	31	<2	<2	<2	<2	<2	<2	<2	<2	0
Lithium (mg/L as Li)	--	--	--	--	--	--	--	--	--	--	--
Manganese ( $\mu\text{g/L}$ as Mn)	31	29	<2	<2	<2	<2	<2	<2	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	8	8	<5	--	<5	<5	<5	--	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	--	--	--	--	--	--	--	--	--	--	--
Strontium ( $\mu\text{g/L}$ as Sr)	10	0	165	222	282	329	379	388	394	318	69
Vanadium ( $\mu\text{g/L}$ as V)	8	0	18	--	21	25	33	--	39	27	8
Zinc ( $\mu\text{g/L}$ as Zn)	10	3	<5	<5	<5	5	23	43	59	15	17
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	7	<1	--	<1	<1	<1	--	1.84	1.14	0.3

**Table 28.--Construction information and summary statistics for water-quality data for Griegos 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'23"	Well capacity (gal/min): 2,310	Ground elevation (ft asl): 4,972
Longitude: 106°39'50"	Cased depth (ft bls): 802	Static water level (ft bls): 30.56
Date drilled: 1955	Screened interval (ft bls): 232-802	Static water level date: 1/27/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	27	0	230	260	340	405	414	475	513	384	73.8
pH, field (standard units)	27	0	7.05	7.32	7.46	7.56	7.8	8.1	8.3	7.63	0.3
pH, lab (standard units)	17	0	7.22	7.38	7.61	7.74	7.82	7.86	7.9	7.69	0.18
Eh, field (mV)	16	0	-18	87	118	178	211	484	519	206	149
Temperature, field (deg C)	27	0	15.4	15.9	17.6	17.9	18.1	20	23	17.9	1.6
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	122	124	144	146	175	186	198	155	21.8
Alkalinity (mg/L as $\text{CaCO}_3$ )	29	0	120	123	125	128	136	143	149	131	7.56
Langelier saturation index (standard units)	25	0	-0.7	-0.44	-0.24	-0.15	0	0.5	0.7	-0.09	0.33
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	29	0	250	268	288	300	320	338	368	303	26.5
Calcium (mg/L as Ca)	20	0	35.1	35.2	37.4	41.2	45.5	52.6	59.3	42.5	6.66
Calcium (mg/L as $\text{CaCO}_3$ )	23	0	96	99	102	105	123	130	168	113	17.3
Magnesium (mg/L as Mg)	18	0	9.19	9.35	10.4	11.5	14.2	15.7	16.7	12	2.22
Sodium (mg/L as Na)	20	0	19.2	19.5	21.1	23.6	24.5	26.3	28.3	23.3	2.44
Potassium (mg/L as K)	18	0	6.68	6.88	7.64	8.18	8.34	9.37	9.95	8.09	0.81
Bicarbonate (mg/L as $\text{CaCO}_3$ )	29	0	119	122	124	127	135	142	148	130	7.65
Carbonate (mg/L as $\text{CaCO}_3$ )	28	24	<1	<1	<1	<1	<1	1.47	2.32	1.1	0.3
Sulfate (mg/L as $\text{SO}_4$ )	29	0	49.4	57.1	59.4	60.7	63.2	80	86.9	63.6	9.25
Chloride (mg/L as Cl)	29	0	5.65	10.7	11.5	12.1	13	15.6	16.3	12.3	2.02
Fluoride (mg/L as F)	27	0	0.26	0.31	0.36	0.41	0.47	0.5	0.6	0.41	0.08
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	57	57.6	59.3	64.4	70.9	73	74.6	65.1	6.28
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	11	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.05	0.01
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	29	0	4	5	6	6	7	7	8	6	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	50	54	57	62	74	77	107	65	14
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	2	<50	<50	59	68	72	80	232	77	48
Cadmium ( $\mu\text{g/L}$ as Cd)	9	8	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	8	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	10	<5	<5	<5	<5	9	16	17	7	4
Iron ( $\mu\text{g/L}$ as Fe)	19	3	<10	<10	12	14	27	62	121	25	26
Lead ( $\mu\text{g/L}$ as Pb)	28	23	<2	<2	<2	<2	<2	8	12	3	3
Lithium (mg/L as Li)	4	0	0.06	--	0.07	0.07	0.07	--	0.08	0.07	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	20	11	<2	<2	<2	<2	2	4	17	3	3
Nickel ( $\mu\text{g/L}$ as Ni)	15	13	<5	<5	<5	<5	<5	6	19	6	4
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	506	534	573	638	727	905	910	663	122
Vanadium ( $\mu\text{g/L}$ as V)	13	10	<10	<10	<10	<10	<10	16	25	12	4
Zinc ( $\mu\text{g/L}$ as Zn)	17	8	<5	<5	<5	5	10	15	18	8	4
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	10	<1	<1	<1	<1	1.06	1.3	2.16	1.1	0.29

**Table 29.--Construction information and summary statistics for water-quality data for Griegos 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°07'49"	Well capacity (gal/min): 1,830	Ground elevation (ft asl): 4,965
Longitude: 106°40'07"	Cased depth (ft bls): 820	Static water level (ft bls): 29
Date drilled: 1954	Screened interval (ft bls): 164-820	Static water level date: 6/8/94

**Summary statistics (data from 1988 to 1993)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	20	0	280	335	420	482	492	515	579	452	73.7
pH, field (standard units)	20	0	6.74	7.22	7.46	7.57	7.9	8	8	7.61	0.32
pH, lab (standard units)	9	0	7.35	--	7.6	7.62	7.75	--	8.2	7.68	0.25
Eh, field (mV)	8	0	87	--	121	158	232	--	463	196	121
Temperature, field (deg C)	20	0	16.8	17.1	18	18.45	18.85	19.5	27	18.8	2.1
Hardness (mg/L as CaCO <sub>3</sub> )	9	0	135	--	162	166	168	--	177	164	12
Alkalinity (mg/L as CaCO <sub>3</sub> )	22	0	150	151	153	160	166	175	211	163	13.9
Langelier saturation index (standard units)	19	0	-0.8	-0.5	-0.08	0.1	0.4	0.6	0.7	0.08	0.38
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	22	0	276	308	325	359	385	404	430	357	39.9
Calcium (mg/L as Ca)	12	0	39	39.4	43.6	47	48.6	49.8	55.1	46.3	4.52
Calcium (mg/L as CaCO <sub>3</sub> )	17	0	116	118	120	126	146	162	176	134	18.1
Magnesium (mg/L as Mg)	10	0	10.5	10.8	11.4	11.8	12.6	13.7	13.9	12	1.06
Sodium (mg/L as Na)	12	0	28.6	28.9	31.6	34.3	36.2	37.8	41.6	34.1	3.69
Potassium (mg/L as K)	10	0	7.56	7.95	8.4	8.58	8.92	9.75	10.1	8.72	0.68
Bicarbonate (mg/L as CaCO <sub>3</sub> )	22	0	148	150	152	159	165	174	210	162	14
Carbonate (mg/L as CaCO <sub>3</sub> )	22	13	<1	<1	<1	<1	1.48	2.33	2.55	1.35	0.55
Sulfate (mg/L as SO <sub>4</sub> )	22	0	61.3	65.8	75.2	79.2	82.1	91.1	112	79.8	11.2
Chloride (mg/L as Cl)	22	0	6.08	11	11.9	12.4	13.6	15.6	17.2	12.5	2.69
Fluoride (mg/L as F)	22	0	0.28	0.32	0.37	0.4	0.44	0.45	0.52	0.4	0.06
Bromide (mg/L as Br)	1	1	<0.5	--	--	<0.5	--	--	<0.5	<0.5	--
Silica (mg/L as SiO <sub>2</sub> )	4	0	62.6	--	62.6	68.5	74.8	--	75.3	68.7	7.06
<b>Nutrients</b>											
Nitrite (mg/L as N)	1	1	<0.05	--	--	<0.05	--	--	<0.05	<0.05	--
Nitrate (mg/L as N)	2	2	<0.05	--	--	<0.05	--	--	<0.05	<0.05	0
Orthophosphate (mg/L as P)	1	1	<0.5	--	--	<0.5	--	--	<0.5	<0.5	--
<b>Trace elements</b>											
Aluminum (µg/L as Al)	9	9	<40	--	<40	<40	<40	--	<40	<40	0
Antimony (µg/L as Sb)	2	2	<2	--	--	<2	--	--	<2	<2	0
Arsenic (µg/L as As)	22	0	3	4	4	5	6	6	6	5	1
Barium (µg/L as Ba)	9	0	50	--	56	62	63	--	105	65	17
Beryllium (µg/L as Be)	1	1	<1	--	--	<1	--	--	<1	<1	--
Boron (µg/L as B)	5	1	<50	--	70	73	75	--	100	74	18
Cadmium (µg/L as Cd)	1	1	<0.1	--	--	<0.1	--	--	<0.1	<0.1	--
Chromium (µg/L as Cr)	1	1	<1	--	--	<1	--	--	<1	<1	--
Copper (µg/L as Cu)	9	2	<5	--	6	9	16	--	153	28	48
Iron (µg/L as Fe)	12	3	<10	<10	11	14	23	33	125	25	32
Lead (µg/L as Pb)	21	9	<2	<2	<2	3	5	8	14	4	3
Lithium (mg/L as Li)	4	0	0.07	--	0.07	0.08	0.09	--	0.09	0.08	0.01
Manganese (µg/L as Mn)	12	0	12	13	14	16	18	18	20	16	2
Nickel (µg/L as Ni)	7	7	<5	--	<5	<5	<5	--	<5	<5	0
Selenium (µg/L as Se)	2	2	<2	--	--	<2	--	--	<2	<2	0
Silver (µg/L as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	9	0	583	--	637	710	737	--	966	724	126
Vanadium (µg/L as V)	5	4	<10	--	<10	<10	<10	--	15	11	2
Zinc (µg/L as Zn)	9	3	<5	--	<5	8	21	--	48	15	15
<b>Carbon</b>											
Total organic carbon (mg/L as C)	8	4	<1	--	<1	1.03	1.84	--	2.33	1.38	0.54

**Table 30.--Construction information and summary statistics for water-quality data for Griegos 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'05"	Well capacity (gal/min): 1,980	Ground elevation (ft asl): 4,968
Longitude: 106°40'26"	Cased depth (ft bls): 916	Static water level (ft bls): 18.95
Date drilled: 1954	Screened interval (ft bls): 260-916	Static water level date: 1/27/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	25	0	240	280	360	406	412	422	440	375	58.4
pH, field (standard units)	25	0	7.2	7.34	7.73	7.89	8.1	8.4	8.8	7.9	0.36
pH, lab (standard units)	16	0	7.5	7.76	7.88	7.97	8.03	8.1	8.1	7.94	0.15
Eh, field (mV)	16	0	6	50	71	130	163	201	562	140	125
Temperature, field (deg C)	25	0	15.6	16.7	18	18.3	18.4	19	22	18.3	1.2
Hardness (mg/L as $\text{CaCO}_3$ )	17	0	92	98	99.5	101	110	130	133	107	12
Alkalinity (mg/L as $\text{CaCO}_3$ )	26	0	110	114	116	118	120	124	137	119	5.17
Langelier saturation index (standard units)	23	0	-0.7	-0.53	-0.14	0.03	0.2	0.47	0.9	0.02	0.37
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	26	0	245	275	284	296	300	312	324	292	17.1
Calcium (mg/L as Ca)	20	0	25.6	28.4	29.4	30.1	35	36.4	37.5	31.5	3.36
Calcium (mg/L as $\text{CaCO}_3$ )	22	0	71.1	74	75.6	78.6	81.3	95	100	80.9	8.24
Magnesium (mg/L as Mg)	18	0	3.63	5.09	5.82	6.05	6.96	7.52	7.75	6.17	0.95
Sodium (mg/L as Na)	20	0	25.1	35.9	40.5	43.1	46.1	50	52.2	42.6	6.09
Potassium (mg/L as K)	18	0	3.48	4.96	5.98	6.46	6.6	7.29	7.52	6.25	0.89
Bicarbonate (mg/L as $\text{CaCO}_3$ )	26	0	101	113	115	116	119	124	136	117	6.06
Carbonate (mg/L as $\text{CaCO}_3$ )	25	11	<1	<1	<1	1.03	1.36	1.73	2.15	1.23	0.33
Sulfate (mg/L as $\text{SO}_4$ )	26	0	53.1	53.9	65.1	66.3	67.7	69.9	74.9	65.5	5.03
Chloride (mg/L as Cl)	26	0	10.4	10.9	11.3	11.6	12.2	12.7	13.9	11.8	0.86
Fluoride (mg/L as F)	25	0	0.38	0.42	0.46	0.5	0.53	0.56	0.74	0.5	0.07
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	38.3	56.6	57.1	63.7	66.3	70.2	80.4	62.3	9.98
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	9	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.06	0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	71	42	8
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	26	0	4	5	6	6	7	7	7	6	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	38	47	49	55	60	62	86	56	10
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	1	<50	69	78	90	108	171	209	103	45
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	9	<5	<5	<5	<5	39	108	131	28	41
Iron ( $\mu\text{g}/\text{L}$ as Fe)	20	11	<10	<10	<10	<10	14	18	52	14	9
Lead ( $\mu\text{g}/\text{L}$ as Pb)	25	18	<2	<2	<2	<2	3	13	25	4	6
Lithium (mg/L as Li)	4	0	0.06	--	0.07	0.07	0.08	--	0.08	0.07	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	20	17	<2	<2	<2	<2	<2	3	3	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	13	<5	<5	<5	<5	<5	<5	17	6	3
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	310	350	386	433	467	546	554	432	67
Vanadium ( $\mu\text{g}/\text{L}$ as V)	12	4	<10	<10	<10	12	14	16	32	14	6
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	9	<5	<5	<5	<5	22	32	100	16	24
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	10	<1	<1	<1	<1	1.02	1.34	1.8	1.1	0.22

**Table 31.--Construction information and summary statistics for water-quality data for Griegos 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'24"	Well capacity (gal/min): 1,910	Ground elevation (ft asl): 4,975
Longitude: 106°39'02"	Cased depth (ft bls): 804	Static water level (ft bls): 48
Date drilled: 1954	Screened interval (ft bls): 218-804	Static water level date: 3/13/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	33	0	176	240	292	344	375	385	405	326	61.6
pH, field (standard units)	34	0	7.03	7.36	7.53	7.7	8.1	8.2	8.4	7.74	0.34
pH, lab (standard units)	19	0	7.4	7.5	7.77	7.88	7.96	8.03	8.38	7.86	0.2
Eh, field (mV)	18	0	48	58	120	181	218	553	654	230	166
Temperature, field (deg C)	34	0	17.5	18.4	18.5	18.6	19	20	26.1	19	1.4
Hardness (mg/L as $\text{CaCO}_3$ )	18	0	91	102	103	105	107	117	120	106	6.08
Alkalinity (mg/L as $\text{CaCO}_3$ )	34	0	120	124	127	129	133	139	146	130	6.03
Langelier saturation index (standard units)	31	0	-1.1	-0.59	-0.37	-0.1	0.3	0.4	0.5	-0.12	0.4
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	172	236	258	274	280	290	304	266	24
Calcium (mg/L as Ca)	21	0	19.1	22.4	26.1	29.4	32.5	37.4	39.7	29.5	5.34
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	69.3	71.4	72.6	75.1	77.2	87	96	76.8	6.4
Magnesium (mg/L as Mg)	19	0	5.14	5.97	6.77	8.11	8.52	10.5	10.8	8.03	1.49
Sodium (mg/L as Na)	21	0	23.5	29.7	33.2	36	37	38.3	43.3	35.2	4.37
Potassium (mg/L as K)	19	0	4.82	5.81	6.68	7.48	7.87	8.29	9.02	7.24	1
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	118	123	126	127	133	139	145	129	6.12
Carbonate (mg/L as $\text{CaCO}_3$ )	34	15	<1	<1	<1	1.04	1.26	1.88	3.22	1.26	0.47
Sulfate (mg/L as $\text{SO}_4$ )	34	0	35.3	41.8	43.9	45.3	46.2	50.1	51.8	45.2	3.5
Chloride (mg/L as Cl)	33	0	7.57	8.11	8.91	9.38	9.76	10.6	11.2	9.37	0.85
Fluoride (mg/L as F)	33	0	0.48	0.59	0.64	0.68	0.72	0.74	0.92	0.68	0.09
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	13	0	43.1	56.3	57.2	64.7	70.9	73.2	89	64.8	11.2
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	11	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	87	43	12
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	35	0	9	12	12	13	14	15	16	13	1
Barium ( $\mu\text{g/L}$ as Ba)	16	0	41	42	48	54	60	76	91	56	13
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	2	<50	<50	63	74	90	97	131	78	23
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	15	12	<5	<5	<5	<5	<5	22	59	10	14
Iron ( $\mu\text{g/L}$ as Fe)	21	6	<10	<10	<10	14	23	37	2190	214	626
Lead ( $\mu\text{g/L}$ as Pb)	33	27	<2	<2	<2	<2	<2	3	75	4	13
Lithium (mg/L as Li)	3	0	0.09	--	--	0.09	--	--	0.1	0.09	0
Manganese ( $\mu\text{g/L}$ as Mn)	21	13	<2	<2	<2	<2	3	4	24	4	5
Nickel ( $\mu\text{g/L}$ as Ni)	13	13	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	5	5	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	282	294	370	422	454	492	551	413	70
Vanadium ( $\mu\text{g/L}$ as V)	12	2	<10	<10	13	16	19	20	20	16	4
Zinc ( $\mu\text{g/L}$ as Zn)	15	7	<5	<5	<5	6	12	19	31	10	7
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	9	<1	<1	<1	<1	1.12	1.41	1.96	1.12	0.26

**Table 32.--Construction information and summary statistics for water-quality data for Leavitt 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'12"	Well capacity (gal/min): 1,560	Ground elevation (ft asl): 5,083
Longitude: 106°43'46"	Cased depth (ft bls): 1,229	Static water level (ft bls): 199.90
Date drilled: 1973	Screened interval (ft bls): 317-1,217	Static water level date: 1/7/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	116	0	260	380	436	457	467	475	698	444	52.1
pH, field (standard units)	119	0	6.75	8.19	8.4	8.59	8.7	8.83	9.37	8.54	0.31
pH, lab (standard units)	85	0	8.38	8.54	8.59	8.63	8.7	8.83	9.2	8.66	0.14
Eh, field (mV)	77	0	31	93	135	170	236	272	694	192	112
Temperature, field (deg C)	119	0	19	22.9	23.2	23.4	24	25.9	33.9	23.9	1.8
Hardness (mg/L as $\text{CaCO}_3$ )	66	0	10.7	14	17.9	20	23.2	27.9	32.4	20.6	4.67
Alkalinity (mg/L as $\text{CaCO}_3$ )	118	0	125	137	141	144	146	152	162	144	6.38
Langelier saturation index (standard units)	114	0	-0.67	-0.25	-0.02	0.15	0.28	0.4	1	0.12	0.27
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	118	0	240	278	290	304	315	332	458	305	27.4
Calcium (mg/L as Ca)	69	0	3.19	4.09	5.11	5.68	5.99	6.47	7.67	5.49	0.89
Calcium (mg/L as $\text{CaCO}_3$ )	113	0	6.09	11	14	16	17.6	19.8	33.8	15.6	3.66
Magnesium (mg/L as Mg)	68	0	0.6	0.79	1.02	1.16	1.24	1.27	1.52	1.11	0.19
Sodium (mg/L as Na)	70	0	53.7	88.1	91.2	93.7	98.7	103	117	94.8	8.24
Potassium (mg/L as K)	68	6	<1	1.05	1.44	1.59	1.75	1.9	2.03	1.56	0.27
Bicarbonate (mg/L as $\text{CaCO}_3$ )	118	0	110	130	135	138	141	149	158	138	7.96
Carbonate (mg/L as $\text{CaCO}_3$ )	118	2	<1	3.14	4.61	5.39	6.37	8.4	16.5	5.76	2.6
Sulfate (mg/L as $\text{SO}_4$ )	114	0	44.7	52.9	54.5	55.5	57.6	60.1	77.7	55.8	4.5
Chloride (mg/L as Cl)	117	0	8.26	10.5	11.2	11.8	12.5	13.3	34.2	12.3	3.19
Fluoride (mg/L as F)	114	0	0.85	1.21	1.27	1.33	1.41	1.46	1.83	1.33	0.13
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	61	0	24.7	28.5	29.6	31.3	33.8	36.2	45.1	32	3.92
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	51	0	1.73	1.94	2.03	2.28	2.59	2.85	3.05	2.31	0.34
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	16	<40	<40	<40	<40	<40	42	95	43	13
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	120	0	26	33	36	38	41	43	56	38	4
Barium ( $\mu\text{g/L}$ as Ba)	18	0	15	16	21	23	25	31	35	23	5
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	179	213	224	244	271	301	336	251	43
Cadmium ( $\mu\text{g/L}$ as Cd)	9	4	<0.1	--	<0.1	0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	0	5	--	6	8	12	--	13	8	3
Copper ( $\mu\text{g/L}$ as Cu)	18	17	<5	<5	<5	<5	<5	<5	8	5	1
Iron ( $\mu\text{g/L}$ as Fe)	71	63	<10	<10	<10	<10	<10	11	28	11	3
Lead ( $\mu\text{g/L}$ as Pb)	118	100	<2	<2	<2	<2	<2	2	18	2	2
Lithium (mg/L as Li)	4	0	0.04	--	0.04	0.04	0.05	--	0.05	0.04	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	71	71	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	7	<2	<2	<2	<2	2	4	5	2	1
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	55	66	77	81	88	95	100	81	11
Vanadium ( $\mu\text{g/L}$ as V)	14	0	45	54	55	62	77	87	100	66	15
Zinc ( $\mu\text{g/L}$ as Zn)	18	13	<5	<5	<5	<5	5	10	20	6	4
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	14	<1	<1	<1	<1	<1	3.23	8.48	1.6	1.86

**Table 33.—Construction information and summary statistics for water-quality data for Leavitt 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°02'48"	Well capacity (gal/min): 1,070	Ground elevation (ft asl): 5,073
Longitude: 106°43'40"	Cased depth (ft bls): 1,133	Static water level (ft bls): 162.60
Date drilled: 1973	Screened interval (ft bls): 281-1,121	Static water level date: 1/7/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	122	0	275	390	465	503	525	542	630	489	58.1
pH, field (standard units)	123	0	7.81	8.42	8.56	8.7	8.8	8.9	9.55	8.69	0.23
pH, lab (standard units)	82	0	7.35	8.59	8.71	8.77	8.79	8.82	8.93	8.71	0.21
Eh, field (mV)	76	0	37	86	127	164	223	260	730	187	118
Temperature, field (deg C)	123	0	18	23	23.4	23.9	24.8	25.3	29	24	1.3
Hardness (mg/L as $\text{CaCO}_3$ )	61	0	10	12.2	14	16	18.2	21.9	31.8	16.4	3.76
Alkalinity (mg/L as $\text{CaCO}_3$ )	122	0	130	144	146	150	153	158	183	150	6.83
Langelier saturation index (standard units)	120	0	-0.76	-0.1	0.02	0.2	0.3	0.5	1.3	0.19	0.3
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	123	0	248	305	324	340	355	370	400	338	24.4
Calcium (mg/L as Ca)	66	0	3.72	3.96	4.22	4.4	4.5	4.7	5.96	4.39	0.35
Calcium (mg/L as $\text{CaCO}_3$ )	117	0	2	10	11	12	14	16.1	39	12.8	3.76
Magnesium (mg/L as Mg)	64	0	0.34	0.44	0.49	0.51	0.55	0.57	0.65	0.51	0.05
Sodium (mg/L as Na)	66	0	49.7	97.7	102	106	112	120	135	107	11.7
Potassium (mg/L as K)	64	13	<1	<1	1.07	1.21	1.31	1.43	1.6	1.2	0.16
Bicarbonate (mg/L as $\text{CaCO}_3$ )	123	0	119	136	139	142	146	153	174	143	7.61
Carbonate (mg/L as $\text{CaCO}_3$ )	123	2	<1	3.92	6.65	7.68	8.45	9.91	12.5	7.31	2.26
Sulfate (mg/L as $\text{SO}_4$ )	122	0	45.9	58.1	61.3	68.1	76.3	84.8	99	69.3	11
Chloride (mg/L as Cl)	123	0	8.29	16.5	17.6	18.8	20.3	22.4	49	19.3	3.83
Fluoride (mg/L as F)	117	0	1.01	1.37	1.42	1.46	1.53	1.58	1.68	1.47	0.1
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	57	0	24.4	27.7	28.6	29.8	31.4	32.6	38.8	30	2.6
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	47	0	1.07	1.14	1.18	1.31	1.37	1.41	2.15	1.3	0.17
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	15	<40	<40	<40	<40	<40	73	132	47	23
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	125	0	25	29	32	34	37	39	49	34	4
Barium ( $\mu\text{g/L}$ as Ba)	17	0	12	14	15	17	18	25	27	17	4
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	200	226	254	269	314	332	347	276	44
Cadmium ( $\mu\text{g/L}$ as Cd)	8	4	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	2	--	4	5	7	--	8	5	2
Copper ( $\mu\text{g/L}$ as Cu)	17	12	<5	<5	<5	<5	8	18	30	8	7
Iron ( $\mu\text{g/L}$ as Fe)	67	41	<10	<10	<10	<10	14	44	122	19	20
Lead ( $\mu\text{g/L}$ as Pb)	123	107	<2	<2	<2	<2	<2	3	24	3	3
Lithium (mg/L as Li)	4	0	0.04	--	0.04	0.04	0.05	--	0.05	0.04	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	67	63	<2	<2	<2	<2	<2	<2	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	8	<2	--	<2	<2	<2	--	4	2	1
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	50	52	57	59	71	74	75	62	8
Vanadium ( $\mu\text{g/L}$ as V)	13	0	54	57	67	71	72	75	88	69	8
Zinc ( $\mu\text{g/L}$ as Zn)	17	9	<5	<5	<5	<5	11	15	234	21	55
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.27	1.67	1.06	0.18

**Table 34.--Construction information and summary statistics for water-quality data for Leavitt 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°02'28"	Well capacity (gal/min): 2,480	Ground elevation (ft asl): 5,080
Longitude: 106°43'58"	Cased depth (ft bls): 1,520	Static water level (ft bls): 244
Date drilled: 1985	Screened interval (ft bls): 514-1,500	Static water level date: 1/23/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	118	0	332	522	590	695	699	709	822	652	88.8
pH, field (standard units)	122	0	8	8.8	8.9	9	9.1	9.21	9.57	8.99	0.22
pH, lab (standard units)	85	0	8.21	8.97	9.06	9.11	9.15	9.17	9.25	9.07	0.16
Eh, field (mV)	80	0	4	84	106	144	183	297	664	172	121
Temperature, field (deg C)	124	0	14	31.4	32.95	33.4	33.6	33.7	35	32.6	2.8
Hardness (mg/L as CaCO <sub>3</sub> )	65	0	6	7.92	8	10	12	15.7	24	10.5	3.53
Alkalinity (mg/L as CaCO <sub>3</sub> )	120	0	120	127	129	131	135	143	174	133	7.13
Langelier saturation index (standard units)	118	0	-2.2	-0.1	0.21	0.37	0.5	0.68	1.3	0.32	0.39
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	120	0	328	413	429	440	448	465	480	438	21.9
Calcium (mg/L as Ca)	69	0	1.64	2.18	2.33	2.45	2.57	2.75	4.29	2.48	0.39
Calcium (mg/L as CaCO <sub>3</sub> )	120	0	4	6	6.95	8	9.64	10.9	24	8.62	3.39
Magnesium (mg/L as Mg)	68	3	<0.05	0.08	0.09	0.09	0.1	0.1	0.59	0.09	0.06
Sodium (mg/L as Na)	70	0	53.7	124	136	140	147	153	159	138	17.2
Potassium (mg/L as K)	68	68	<1	<1	<1	<1	<1	<1	<1	<1	0
Bicarbonate (mg/L as CaCO <sub>3</sub> )	121	0	107	112	114	117	122	131	169	120	9.33
Carbonate (mg/L as CaCO <sub>3</sub> )	122	0	1.95	6.94	12.2	14	15.4	16.5	19	13.1	3.5
Sulfate (mg/L as SO <sub>4</sub> )	118	0	56.9	113	127	133	137	140	146	130	14.3
Chloride (mg/L as Cl)	122	0	13.2	30.4	30.7	31.6	32.6	33.7	62.1	32	5.12
Fluoride (mg/L as F)	118	0	0.88	0.95	0.98	1.02	1.07	1.12	1.5	1.03	0.08
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	61	0	20.6	33.1	36.7	38.6	40.3	41.9	45.7	38	3.93
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	50	0	1.54	1.65	1.73	1.78	1.81	1.89	2.75	1.79	0.16
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	17	15	<40	<40	<40	<40	<40	62	81	44	11
Antimony (µg/L as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic (µg/L as As)	125	0	26	31	33	35	36	38	45	35	3
Barium (µg/L as Ba)	17	0	3	5	7	8	8	10	14	8	2
Beryllium (µg/L as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	12	0	236	237	280	322	354	379	386	317	51
Cadmium (µg/L as Cd)	8	6	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium (µg/L as Cr)	8	0	21	--	23	23	26	--	37	25	5
Copper (µg/L as Cu)	17	15	<5	<5	<5	<5	<5	5	5	5	0
Iron (µg/L as Fe)	71	67	<10	<10	<10	<10	<10	<10	24	10	2
Lead (µg/L as Pb)	123	120	<2	<2	<2	<2	<2	<2	5	2	0
Lithium (mg/L as Li)	4	0	0.06	--	0.07	0.08	0.09	--	0.1	0.08	0.02
Manganese (µg/L as Mn)	71	71	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel (µg/L as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (µg/L as Se)	9	8	<2	--	<2	<2	<2	--	4	2	1
Silver (µg/L as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	17	0	36	42	46	52	58	59	59	51	6
Vanadium (µg/L as V)	13	0	64	66	68	74	78	79	81	73	5
Zinc (µg/L as Zn)	17	12	<5	<5	<5	<5	6	10	16	6	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	14	<1	<1	<1	<1	<1	1.41	2.92	1.15	0.49

**Table 35.--Construction information and summary statistics for water-quality data for Leyendecker 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'52"	Well capacity (gal/min): 2,630	Ground elevation (ft asl): 5,285
Longitude: 106°34'21"	Cased depth (ft bls): 996	Static water level (ft bls): 420.52
Date drilled: 1959	Screened interval (ft bls): 468-996	Static water level date: 12/16/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	33	0	210	220	301	316	318	322	510	307	49.3
pH, field (standard units)	32	0	7.33	7.54	7.65	7.73	7.88	7.93	8	7.74	0.16
pH, lab (standard units)	18	0	7.26	7.33	7.59	7.89	8.01	8.04	8.06	7.78	0.27
Eh, field (mV)	17	0	75	100	120	136	157	295	411	164	82
Temperature, field (deg C)	33	0	18	18.1	18.6	18.8	18.8	19.5	21.1	18.8	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	111	112	114	116	117	124	127	116	4.14
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	108	109	110	112	115	123	126	114	5.15
Langelier saturation index (standard units)	29	0	-0.5	-0.35	-0.11	-0.02	0.1	0.15	0.3	-0.04	0.18
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	32	0	152	184	197	207	215	222	250	205	17.6
Calcium (mg/L as Ca)	21	0	37.8	39.3	40.3	42	44	46.6	47.9	42.4	2.8
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	88.9	98	100	104	105	121	135	105	10.3
Magnesium (mg/L as Mg)	19	0	3.37	3.38	3.59	3.74	3.93	4.07	4.17	3.75	0.23
Sodium (mg/L as Na)	22	0	12.2	18.2	19	19.8	21.6	24	26.2	20.3	2.88
Potassium (mg/L as K)	20	1	<1	1.62	1.93	2.13	2.22	2.39	4.08	2.13	0.56
Bicarbonate (mg/L as $\text{CaCO}_3$ )	33	0	107	109	109	111	114	122	125	113	5.19
Carbonate (mg/L as $\text{CaCO}_3$ )	33	20	<1	<1	<1	<1	1.11	1.64	37	2.2	6.25
Sulfate (mg/L as $\text{SO}_4$ )	33	0	24.9	27.8	29.6	30.6	31.1	31.5	33.4	30.1	1.98
Chloride (mg/L as Cl)	33	0	6.04	9.37	9.68	10	10.6	11.4	40.4	11	5.41
Fluoride (mg/L as F)	31	0	0.46	0.48	0.49	0.53	0.57	0.59	0.71	0.54	0.05
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	13	0	29.3	29.5	32.7	34	35.3	37.4	41	34.1	3.05
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.51	0.53	0.61	0.64	0.78	0.85	0.85	0.68	0.12
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	15	<40	<40	<40	<40	<40	42	91	43	12
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	34	0	3	5	5	5	6	6	7	5	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	72	72	75	86	87	111	120	87	15
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	3	<50	<50	51	53	61	67	72	56	7
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	14	<5	<5	<5	<5	<5	8	15	6	2
Iron ( $\mu\text{g/L}$ as Fe)	22	16	<10	<10	<10	<10	10	23	784	47	165
Lead ( $\mu\text{g/L}$ as Pb)	33	30	<2	<2	<2	<2	<2	<2	4	2	0
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.03	0.03	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	22	19	<2	<2	<2	<2	<2	2	4	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	13	<5	<5	<5	<5	<5	9	10	6	2
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	208	212	227	246	276	299	367	257	40
Vanadium ( $\mu\text{g/L}$ as V)	13	11	<10	<10	<10	<10	<10	10	14	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	17	9	<5	<5	<5	<5	7	15	57	9	13
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.1	1.17	1.02	0.05

**Table 36.--Construction information and summary statistics for water-quality data for Leyendecker 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'29"	Well capacity (gal/min): 2,450	Ground elevation (ft asl): 5,298
Longitude: 106°34'07"	Cased depth (ft bls): 996	Static water level (ft bls): 436.15
Date drilled: 1959	Screened interval (ft bls): 468-996	Static water level date: 12/16/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	32	0	190	240	288	324	327	333	370	305	39.6
pH, field (standard units)	32	0	7.19	7.36	7.53	7.71	7.82	8	8.1	7.69	0.23
pH, lab (standard units)	17	0	7.3	7.32	7.63	7.92	7.95	8	8.03	7.79	0.23
Eh, field (mV)	17	0	89	104	130	181	222	293	419	189	82
Temperature, field (deg C)	32	0	16	18.7	18.8	18.9	19	20	22	19	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	17	0	112	112	114	116	118	120	122	116	2.91
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	109	112	113	114	117	123	127	116	4.38
Langelier saturation index (standard units)	29	0	-0.6	-0.43	-0.2	-0.06	0.1	0.3	0.4	-0.08	0.25
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	168	185	196	210	220	224	275	209	19.3
Calcium (mg/L as Ca)	21	0	34.2	37	38.7	42.2	44.2	46.8	48.9	41.9	3.9
Calcium (mg/L as $\text{CaCO}_3$ )	29	0	91	95	100	102	106	119	130	105	9.02
Magnesium (mg/L as Mg)	20	0	3.17	3.2	3.44	3.52	3.68	3.91	4.24	3.57	0.26
Sodium (mg/L as Na)	22	0	19.9	20.3	22.2	22.7	24	26.1	27.6	23.1	2.14
Potassium (mg/L as K)	20	0	1.82	2.05	2.18	2.39	2.54	2.96	3.1	2.4	0.33
Bicarbonate (mg/L as $\text{CaCO}_3$ )	32	0	107	111	112	113	116	124	127	115	5.05
Carbonate (mg/L as $\text{CaCO}_3$ )	31	19	<1	<1	<1	<1	1.13	1.36	1.68	1.1	0.19
Sulfate (mg/L as $\text{SO}_4$ )	31	0	25.1	27.2	31.3	32.7	33.6	34.1	35	31.9	2.63
Chloride (mg/L as Cl)	32	0	8.66	9.31	9.65	10.2	10.6	11.4	19.7	10.5	1.84
Fluoride (mg/L as F)	31	0	0.48	0.51	0.52	0.56	0.61	0.65	0.75	0.57	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	13	0	29.1	30.2	30.8	32	35.1	36.3	37.1	32.8	2.56
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.32	0.33	0.35	0.37	0.43	0.54	0.61	0.4	0.09
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	33	2	<2	2	3	3	3	4	4	3	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	61	65	68	76	84	92	108	77	12
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	3	<50	<50	50	57	67	72	73	59	9
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	6	<1	--	<1	<1	1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	15	<5	<5	<5	<5	<5	8	11	6	2
Iron ( $\mu\text{g/L}$ as Fe)	22	17	<10	<10	<10	<10	<10	11	390	29	81
Lead ( $\mu\text{g/L}$ as Pb)	32	31	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.03	0.03	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	22	20	<2	<2	<2	<2	<2	<2	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	14	<5	<5	<5	<5	<5	<5	10	5	1
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	157	167	179	201	221	251	254	204	30
Vanadium ( $\mu\text{g/L}$ as V)	13	11	<10	<10	<10	<10	<10	10	18	11	2
Zinc ( $\mu\text{g/L}$ as Zn)	17	12	<5	<5	<5	<5	5	13	39	8	8
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	15	<1	<1	<1	<1	<1	<1	1.15	1.01	0.04

**Table 37.--Construction information and summary statistics for water-quality data for Leyendecker 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'15"	Well capacity (gal/min): 2,330	Ground elevation (ft asl): 5,265
Longitude: 106°34'38"	Cased depth (ft bls): 996	Static water level (ft bls): 393.40
Date drilled: 1960	Screened interval (ft bls): 456-996	Static water level date: 12/16/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	32	0	170	240	263	301	306	316	320	285	37.2
pH, field (standard units)	32	0	7.08	7.54	7.67	7.84	7.92	8.02	8.1	7.78	0.23
pH, lab (standard units)	18	0	7.07	7.09	7.3	7.93	8.05	8.1	8.23	7.75	0.39
Eh, field (mV)	17	0	113	116	138	173	195	225	259	171	42
Temperature, field (deg C)	32	0	16	17.5	17.8	18	18.1	19	23.9	18.4	1.7
Hardness (mg/L as $\text{CaCO}_3$ )	18	0	111	111	112	115	119	125	125	116	4.61
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	104	107	108	109	111	116	122	110	3.98
Langelier saturation index (standard units)	30	1	-0.8	-0.37	-0.19	0	0.1	0.31	1	-0.01	0.32
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	32	0	145	170	188	201	206	208	236	195	18.1
Calcium (mg/L as Ca)	22	0	29.8	36.9	38.9	40.1	41.1	42.4	43.8	39.6	2.9
Calcium (mg/L as $\text{CaCO}_3$ )	29	0	88.9	94.1	96.5	99.8	103	106	126	101	7.92
Magnesium (mg/L as Mg)	20	0	3.81	3.97	4.13	4.23	4.38	4.75	5.26	4.3	0.33
Sodium (mg/L as Na)	22	0	15.7	15.8	16.7	17.3	18.2	19.1	22.8	17.6	1.61
Potassium (mg/L as K)	20	0	1.61	1.85	1.93	2.11	2.24	2.4	2.97	2.11	0.28
Bicarbonate (mg/L as $\text{CaCO}_3$ )	32	0	104	106	106	108	111	116	122	109	4.22
Carbonate (mg/L as $\text{CaCO}_3$ )	32	15	<1	<1	<1	1.07	1.24	1.27	1.7	1.14	0.19
Sulfate (mg/L as $\text{SO}_4$ )	32	0	20	24.3	26.4	29.9	31.3	33.4	35.4	29.1	3.85
Chloride (mg/L as Cl)	32	0	6.09	7.02	7.6	7.97	8.46	8.86	15.4	8.21	1.53
Fluoride (mg/L as F)	30	0	0.22	0.45	0.47	0.5	0.53	0.55	0.66	0.5	0.07
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	13	0	27.5	28.4	30.4	31.6	33.8	35.7	36.5	31.9	2.73
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.25	0.26	0.31	0.45	0.5	0.55	0.55	0.42	0.11
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	75	42	8
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	33	0	4	5	6	6	7	7	8	6	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	74	75	77	83	94	97	131	87	14
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	7	<50	<50	<50	<50	62	93	140	63	26
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.2	--	0.3	0.1	0.1
Chromium ( $\mu\text{g/L}$ as Cr)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g/L}$ as Cu)	16	13	<5	<5	<5	<5	<5	7	30	7	6
Iron ( $\mu\text{g/L}$ as Fe)	21	16	<10	<10	<10	<10	<10	15	66	13	12
Lead ( $\mu\text{g/L}$ as Pb)	32	24	<2	<2	<2	<2	<2	3	5	2	1
Lithium (mg/L as Li)	3	0	0.03	--	--	0.03	--	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	21	18	<2	<2	<2	<2	<2	2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	208	210	216	241	258	283	284	241	26
Vanadium ( $\mu\text{g/L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	16	10	<5	<5	<5	<5	6	14	23	7	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	14	<1	<1	<1	<1	<1	1.18	1.63	1.05	0.16

**Table 38.--Construction information and summary statistics for water-quality data for Leyendecker 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'14"	Well capacity (gal/min): 2,280	Ground elevation (ft asl): 5.325
Longitude: 106°34'07"	Cased depth (ft bls): 996	Static water level (ft bls): 455.00
Date drilled: 1960	Screened interval (ft bls): 480-996	Static water level date: 12/5/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	35	0	200	250	301	338	345	353	390	320	40.7
pH, field (standard units)	35	0	7.06	7.36	7.51	7.67	7.8	7.92	8.3	7.64	0.26
pH, lab (standard units)	19	0	7.4	7.44	7.53	7.89	7.98	8.01	8.04	7.78	0.22
Eh, field (mV)	18	0	96	117	142	176	201	224	281	176	44
Temperature, field (deg C)	35	0	18	18.8	19.1	19.2	19.3	20	23	19.4	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	18	0	117	118	121	123	127	136	136	124	5.24
Alkalinity (mg/L as $\text{CaCO}_3$ )	34	0	103	119	121	122	125	131	134	123	5.64
Langelier saturation index (standard units)	32	0	-0.69	-0.4	-0.28	-0.02	0.03	0.2	0.7	-0.08	0.28
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	35	0	192	198	210	224	229	232	244	219	13.8
Calcium (mg/L as Ca)	22	0	39.7	40.1	41.5	42.9	44	46	49.8	43.1	2.39
Calcium (mg/L as $\text{CaCO}_3$ )	32	0	88.1	102	104	106	111	112	135	108	8.68
Magnesium (mg/L as Mg)	21	0	3.9	4.05	4.13	4.34	4.49	4.81	5.33	4.36	0.34
Sodium (mg/L as Na)	23	0	21.6	22	22.7	23.7	25.4	26	30	24.2	1.93
Potassium (mg/L as K)	21	1	<1	1.67	1.86	1.97	2.13	2.37	2.5	1.96	0.34
Bicarbonate (mg/L as $\text{CaCO}_3$ )	35	0	101	118	120	121	126	131	134	122	6.03
Carbonate (mg/L as $\text{CaCO}_3$ )	35	21	<1	<1	<1	<1	1.19	1.41	1.5	1.11	0.17
Sulfate (mg/L as $\text{SO}_4$ )	32	0	24.8	27.9	31.5	33.9	34.5	34.9	36.5	32.6	2.9
Chloride (mg/L as Cl)	34	0	8.94	10	10.4	11.1	11.7	12.3	33.8	11.9	4.2
Fluoride (mg/L as F)	34	0	0.3	0.53	0.55	0.58	0.61	0.66	0.75	0.58	0.07
Bromide (mg/L as Br)	9	8	<0.5	--	<0.5	<0.5	<0.5	--	0.8	0.5	0.1
Silica (mg/L as $\text{SiO}_2$ )	13	0	30.7	30.7	32.2	32.9	35.6	37.7	38.9	33.9	2.74
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.33	0.34	0.35	0.43	0.61	0.64	0.65	0.47	0.13
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	18	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	36	0	3	4	4	5	6	6	10	5	1
Barium ( $\mu\text{g/L}$ as Ba)	18	0	67	71	72	75	87	90	105	79	10
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	3	<50	<50	56	64	75	85	97	67	15
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	18	17	<5	<5	<5	<5	<5	<5	8	5	1
Iron ( $\mu\text{g/L}$ as Fe)	23	17	<10	<10	<10	<10	10	11	16	10	1
Lead ( $\mu\text{g/L}$ as Pb)	35	32	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	5	0	0.04	--	0.04	0.04	0.04	--	0.04	0.04	0
Manganese ( $\mu\text{g/L}$ as Mn)	23	21	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	196	199	211	230	256	273	294	234	28
Vanadium ( $\mu\text{g/L}$ as V)	14	12	<10	<10	<10	<10	<10	14	24	11	4
Zinc ( $\mu\text{g/L}$ as Zn)	18	15	<5	<5	<5	<5	<5	6	18	6	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	16	<1	<1	<1	<1	<1	<1	1.13	1.01	0.03

**Table 39.--Construction information and summary statistics for water-quality data for Lomas 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'29"	Well capacity (gal/min): 1,240	Ground elevation (ft asl): 5,595
Longitude: 106°30'25"	Cased depth (ft bls): 1,300	Static water level (ft bls): 772
Date drilled: 1962	Screened interval (ft bls): 700-1,300	Static water level date: 4/22/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	33	0	190	380	466	521	558	584	619	500	89.5
pH, field (standard units)	33	0	6.8	7.2	7.33	7.42	7.6	7.8	8.1	7.45	0.27
pH, lab (standard units)	16	0	7.22	7.57	7.61	7.69	7.76	7.77	7.82	7.66	0.14
Eh, field (mV)	15	0	117	121	134	189	244	398	657	230	138
Temperature, field (deg C)	32	0	21	21.7	21.9	22	22.2	22.3	23	22	0.4
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	189	205	224	229	235	242	242	227	13.5
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	135	149	155	161	168	179	182	162	11.4
Langelier saturation index (standard units)	29	0	-1.5	-0.4	-0.03	0.06	0.2	0.5	0.8	0.02	0.4
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	220	320	330	356	370	390	424	351	41.2
Calcium (mg/L as Ca)	19	0	68.1	68.3	74.2	75.9	80.7	84.1	84.2	76.9	4.62
Calcium (mg/L as $\text{CaCO}_3$ )	29	0	104	153	176	189	194	207	257	185	26.7
Magnesium (mg/L as Mg)	18	0	9.73	10.5	11.5	11.9	12.3	12.7	12.9	11.8	0.77
Sodium (mg/L as Na)	20	0	24.5	25.8	27.3	28.9	30.6	33.4	45.4	29.6	4.42
Potassium (mg/L as K)	18	0	2.88	3.09	3.25	3.36	3.39	3.51	3.61	3.31	0.17
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	133	149	154	158	168	178	182	161	11.4
Carbonate (mg/L as $\text{CaCO}_3$ )	34	28	<1	<1	<1	<1	<1	1.92	7.39	1.33	1.14
Sulfate (mg/L as $\text{SO}_4$ )	34	0	50	69.9	79.7	81.9	86.4	94.1	112	82.7	10.3
Chloride (mg/L as Cl)	34	0	5.21	15.5	17	20.6	26.2	31.2	36.9	21.5	6.96
Fluoride (mg/L as F)	31	0	0.43	0.44	0.46	0.49	0.52	0.54	0.93	0.51	0.1
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	19.3	20.8	21.1	22.7	23.4	24.2	25.8	22.4	1.77
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	5	<0.05	--	<0.05	<0.05	0.11	--	0.29	0.09	0.09
Nitrate (mg/L as N)	10	0	2.98	3.1	3.26	3.38	3.83	4.29	4.44	3.55	0.46
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	120	45	20
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	34	31	<2	<2	<2	<2	<2	<2	3	2	0
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	73	85	87	91	95	119	135	94	14
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	4	<50	<50	<50	54	73	84	97	61	16
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	15	<5	<5	<5	<5	<5	<5	9	5	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	20	9	<10	<10	<10	10	13	15	17	12	2
Lead ( $\mu\text{g}/\text{L}$ as Pb)	33	30	<2	<2	<2	<2	<2	<2	38	4	9
Lithium (mg/L as Li)	3	0	0.02	--	--	0.02	--	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	20	11	<2	<2	<2	<2	2	3	3	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	13	<5	<5	<5	<5	<5	<5	8	5	1
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	4	<2	--	<2	2	2	--	3	2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	283	291	296	316	349	373	386	324	32
Vanadium ( $\mu\text{g}/\text{L}$ as V)	12	10	<10	<10	<10	<10	<10	10	18	11	2
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	8	<5	<5	<5	<5	6	7	10	6	1
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	9	<1	<1	<1	<1	1.19	1.41	1.86	1.14	0.25

**Table 40.--Construction information and summary statistics for water-quality data for Lomas 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'21"	Well capacity (gal/min): 2,370	Ground elevation (ft asl): 5,494
Longitude: 106°31'24"	Cased depth (ft bls): 1,670	Static water level (ft bls): 644.22
Date drilled: 1978	Screened interval (ft bls): 830-1,658	Static water level date: 12/30/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	27	0	215	220	300	333	339	345	439	315	49.6
pH, field (standard units)	27	0	7.48	7.68	7.77	7.9	8	8.1	8.1	7.88	0.16
pH, lab (standard units)	15	0	7.39	7.55	7.83	8	8.06	8.08	8.17	7.92	0.21
Eh, field (mV)	13	0	89	117	138	188	270	469	510	233	129
Temperature, field (deg C)	27	0	20	25	26.2	26.7	26.9	27	27.1	26.2	1.4
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	84	84	84	85.8	99.7	104	151	93.4	17.9
Alkalinity (mg/L as $\text{CaCO}_3$ )	27	0	120	121	123	125	128	138	256	131	25.6
Langelier saturation index (standard units)	26	0	-0.31	-0.13	0	0.12	0.3	0.4	0.9	0.15	0.25
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	27	0	170	188	208	215	225	268	364	221	39.5
Calcium (mg/L as Ca)	16	0	26.6	26.9	28.4	28.8	31.8	37	46.9	31	5.06
Calcium (mg/L as $\text{CaCO}_3$ )	27	0	58	69.3	70.3	73.2	78.7	94	129	77.4	13.3
Magnesium (mg/L as Mg)	15	0	3.56	3.57	3.74	3.92	4.28	4.83	6.88	4.19	0.82
Sodium (mg/L as Na)	17	0	28.1	36.4	37.5	39.6	41.5	43.5	48.3	39.4	4.18
Potassium (mg/L as K)	15	0	1.95	1.96	2.14	2.45	2.62	2.69	2.69	2.36	0.27
Bicarbonate (mg/L as $\text{CaCO}_3$ )	28	0	72.5	118	121	124	126	137	162	124	13.8
Carbonate (mg/L as $\text{CaCO}_3$ )	28	7	<1	<1	1.02	1.31	1.82	2.83	171	7.52	32
Sulfate (mg/L as $\text{SO}_4$ )	28	0	25.1	29.3	30.9	31.7	32.5	33.8	51.8	32.1	4.43
Chloride (mg/L as Cl)	28	0	5.46	5.86	6.14	6.47	6.92	7.24	10.1	6.63	0.87
Fluoride (mg/L as F)	26	0	0.91	1.15	1.23	1.31	1.33	1.39	1.48	1.28	0.12
Bromide (mg/L as Br)	7	6	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	22.5	25.3	26.2	26.6	30.5	32	33	27.9	3.16
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	10	0	0.43	0.45	0.49	0.54	0.56	0.64	0.71	0.54	0.08
Orthophosphate (mg/L as P)	7	6	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	14	13	<40	<40	<40	<40	<40	<40	88	43	13
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	28	1	<2	3	4	4	5	5	6	4	1
Barium ( $\mu\text{g/L}$ as Ba)	14	0	70	74	78	84	91	94	128	87	14
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	9	<50	<50	<50	<50	<50	51	77	53	8
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	6	<1	--	<1	<1	1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Iron ( $\mu\text{g/L}$ as Fe)	17	15	<10	<10	<10	<10	<10	12	17	11	2
Lead ( $\mu\text{g/L}$ as Pb)	27	23	<2	<2	<2	<2	<2	4	18	3	3
Lithium (mg/L as Li)	2	0	0.02	--	--	0.02	--	--	0.02	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	17	9	<2	<2	<2	<2	2	3	3	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	12	12	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	4	4	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	14	0	177	183	185	203	221	235	240	205	22
Vanadium ( $\mu\text{g/L}$ as V)	10	8	<10	<10	<10	<10	<10	11	12	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	14	8	<5	<5	<5	<5	6	7	10	6	1
<b>Carbon</b>											
Total organic carbon (mg/L as C)	12	9	<1	<1	<1	<1	1.11	1.38	1.41	1.08	0.16

**Table 41.--Construction information and summary statistics for water-quality data for Lomas 6**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'08"	Well capacity (gal/min): 2,180	Ground elevation (ft asl): 5,529
Longitude: 106°31'10"	Cased depth (ft bls): 1,704	Static water level (ft bls): 676.77
Date drilled: 1978	Screened interval (ft bls): 880-1,692	Static water level date: 12/30/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	27	0	255	300	310	421	435	455	480	384	65.9
pH, field (standard units)	27	0	7.22	7.4	7.54	7.68	7.81	8	8	7.67	0.2
pH, lab (standard units)	14	0	7.54	7.66	7.71	7.8	7.87	7.89	7.95	7.78	0.11
Eh, field (mV)	12	0	91	99	124	169	208	233	568	193	127
Temperature, field (deg C)	26	0	22	23	24.8	25	25	26	26	24.7	1
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	112	131	134	138	144	148	161	138	10.9
Alkalinity (mg/L as $\text{CaCO}_3$ )	26	0	135	137	139	144	150	154	157	144	6.38
Langelier saturation index (standard units)	24	0	-0.5	-0.25	-0.04	0.12	0.21	0.3	0.5	0.08	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	27	0	230	242	250	266	292	300	314	269	22.8
Calcium (mg/L as Ca)	18	0	39.9	42.3	43	45.9	48.3	55	55.3	46.4	4.07
Calcium (mg/L as $\text{CaCO}_3$ )	24	0	99	108	112	114	122	130	144	116	10
Magnesium (mg/L as Mg)	16	0	5.72	6.08	6.41	6.77	7.01	7.47	8.27	6.77	0.59
Sodium (mg/L as Na)	18	0	33.4	34.3	37.6	39.1	40.7	43.2	46.2	39.2	3.26
Potassium (mg/L as K)	16	0	2.17	2.35	2.59	2.76	2.82	2.93	3.15	2.7	0.23
Bicarbonate (mg/L as $\text{CaCO}_3$ )	27	0	134	135	138	143	149	154	157	144	6.54
Carbonate (mg/L as $\text{CaCO}_3$ )	27	16	<1	<1	<1	<1	1.2	2.02	13.5	1.65	2.4
Sulfate (mg/L as $\text{SO}_4$ )	28	0	45.3	48.7	54.6	56.2	59.7	62.6	68.6	56.9	5.36
Chloride (mg/L as Cl)	28	0	4.59	8.51	9.05	9.58	10.1	10.7	10.8	9.46	1.18
Fluoride (mg/L as F)	25	0	0.59	0.8	0.83	0.87	0.91	0.94	1	0.86	0.09
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	21.6	22.8	24.2	25.8	26.4	28.8	30.7	25.6	2.54
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.81	0.82	0.84	0.94	1	1.16	1.27	0.96	0.13
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	15	14	<40	<40	<40	<40	<40	<40	133	46	24
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	28	20	<2	<2	<2	<2	2	2	3	2	0
Barium ( $\mu\text{g}/\text{L}$ as Ba)	15	0	83	84	91	95	106	118	124	98	12
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	8	<50	<50	<50	<50	51	53	107	55	17
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	15	12	<5	<5	<5	<5	<5	8	175	17	44
Iron ( $\mu\text{g}/\text{L}$ as Fe)	18	5	<10	<10	<10	16	28	183	455	51	108
Lead ( $\mu\text{g}/\text{L}$ as Pb)	27	20	<2	<2	<2	<2	3	11	28	4	5
Lithium (mg/L as Li)	2	0	0.02	--	--	0.02	--	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	18	0	3	4	4	5	6	7	13	5	2
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	13	13	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	5	5	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	15	0	222	233	240	259	300	311	318	269	32
Vanadium ( $\mu\text{g}/\text{L}$ as V)	11	10	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	15	2	<5	<5	5	6	11	66	702	57	179
<b>Carbon</b>											
Total organic carbon (mg/L as C)	13	9	<1	<1	<1	<1	1.02	1.78	2.7	1.2	0.5

**Table 42.--Construction Information and summary statistics for water-quality data for Love 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°05'16"	Well capacity (gal/min): 1,110	Ground elevation (ft asl): 5,465
Longitude: 106°31'43"	Cased depth (ft bls): 1,096	Static water level (ft bls): 633
Date drilled: 1954	Screened interval (ft bls): 596-1,096	Static water level date: 4/29/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	28	0	180	230	282	292	302	306	415	286	39.4
pH, field (standard units)	28	0	6.68	7.46	7.68	7.77	7.85	7.92	8	7.72	0.25
pH, lab (standard units)	18	0	7.4	7.65	7.8	7.92	8.05	8.15	8.16	7.9	0.19
Eh, field (mV)	16	0	68	76	126	159	193	307	628	186	132
Temperature, field (deg C)	28	0	21	23	23.3	23.7	23.8	23.9	25	23.5	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	13	0	78.3	78.5	80	85	85.5	101	126	87.6	12.9
Alkalinity (mg/L as $\text{CaCO}_3$ )	28	0	106	106	110	112	119	122	139	115	7.23
Langelier saturation index (standard units)	25	0	-1.1	-0.3	-0.18	-0.09	0.02	0.1	0.2	-0.11	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	29	0	160	165	180	190	196	268	276	195	29.6
Calcium (mg/L as Ca)	19	0	22.7	24.9	29.2	31.1	35.3	41.5	42.9	32.2	5.18
Calcium (mg/L as $\text{CaCO}_3$ )	25	0	64	69.1	71.4	74	76.5	78.8	107	74.8	7.76
Magnesium (mg/L as Mg)	18	0	1.72	2.09	2.35	2.47	2.64	4.12	5.75	2.69	0.9
Sodium (mg/L as Na)	19	0	23	25.2	31.3	32.4	34.8	40.5	41.1	32.8	4.64
Potassium (mg/L as K)	18	1	<1	1.16	1.74	2	2.12	2.35	2.39	1.91	0.37
Bicarbonate (mg/L as $\text{CaCO}_3$ )	29	0	105	106	109	112	119	126	142	115	8.93
Carbonate (mg/L as $\text{CaCO}_3$ )	29	18	<1	<1	<1	<1	1.12	1.42	1.77	1.1	0.19
Sulfate (mg/L as $\text{SO}_4$ )	29	0	19.5	21.6	23.2	24.4	25.3	34.6	53.6	26.3	7.5
Chloride (mg/L as Cl)	29	0	5.2	5.65	6.2	6.67	7.62	11.9	22.6	7.84	3.71
Fluoride (mg/L as F)	28	0	0.48	0.66	0.69	0.75	0.79	0.81	0.85	0.73	0.08
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	22.7	24.7	24.7	26.7	29.6	29.7	36.5	27.3	3.75
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	10	0	0.54	0.57	0.63	0.67	0.75	1.1	1.36	0.74	0.23
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	51	41	3
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	29	27	<2	<2	<2	<2	<2	<2	2	2	0
Barium ( $\mu\text{g/L}$ as Ba)	16	0	64	68	87	95	100	107	118	93	13
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	9	<50	<50	<50	<50	53	78	90	56	13
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	4	<1	--	<1	1	2	--	6	2	2
Copper ( $\mu\text{g/L}$ as Cu)	16	12	<5	<5	<5	<5	6	10	12	6	2
Iron ( $\mu\text{g/L}$ as Fe)	19	4	<10	<10	11	15	18	63	173	26	38
Lead ( $\mu\text{g/L}$ as Pb)	28	25	<2	<2	<2	<2	<2	2	3	2	0
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	19	16	<2	<2	<2	<2	<2	4	5	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	14	13	<5	<5	<5	<5	<5	<5	7	5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	165	169	212	237	257	322	326	240	46
Vanadium ( $\mu\text{g/L}$ as V)	13	10	<10	<10	<10	<10	<10	11	18	11	2
Zinc ( $\mu\text{g/L}$ as Zn)	16	4	<5	<5	<5	7	15	25	28	11	7
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	13	<1	<1	<1	<1	<1	1.54	1.56	1.07	0.19

**Table 43.--Construction Information and summary statistics for water-quality data for Love 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'12"	Well capacity (gal/min): 1,680	Ground elevation (ft asl): 5,405
Longitude: 106°32'18"	Cased depth (ft bls): 1,260	Static water level (ft bls): 553
Date drilled: 1958	Screened interval (ft bls): 600-1,260	Static water level date: 4/29/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	43	0	190	250	298	309	312	314	328	295	33.4
pH, field (standard units)	44	0	7.29	7.5	7.68	7.8	7.95	8.06	8.3	7.8	0.23
pH, lab (standard units)	29	0	7.05	7.13	7.6	7.81	7.97	8.11	8.17	7.73	0.33
Eh, field (mV)	28	0	53	114	156	177	224	304	686	202	112
Temperature, field (deg C)	43	0	20.6	23	23.2	23.2	23.4	24	24	23.3	0.5
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	75.9	88	92	96	101	103	103	95.1	7.13
Alkalinity (mg/L as $\text{CaCO}_3$ )	44	0	98.1	102	105	107	108	114	135	108	5.92
Langelier saturation index (standard units)	41	0	-0.52	-0.31	-0.11	0	0.2	0.35	0.5	0.02	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	45	0	120	168	188	195	200	216	228	192	19.5
Calcium (mg/L as Ca)	19	0	26.7	27.4	34.6	36.7	38.4	40.7	41.8	36.1	3.81
Calcium (mg/L as $\text{CaCO}_3$ )	41	0	82	86	88.4	92	98.5	111	144	95.9	12.5
Magnesium (mg/L as Mg)	18	0	1.29	1.39	1.71	1.8	1.87	1.94	2.07	1.77	0.18
Sodium (mg/L as Na)	20	0	19.9	21.9	25.3	26.9	27.9	29.5	32.3	26.5	2.89
Potassium (mg/L as K)	18	0	1.92	2.21	2.27	2.41	2.55	2.8	2.8	2.42	0.21
Bicarbonate (mg/L as $\text{CaCO}_3$ )	45	0	96.9	102	104	106	108	114	140	108	7.58
Carbonate (mg/L as $\text{CaCO}_3$ )	45	30	<1	<1	<1	<1	1.05	1.45	2.01	1.12	0.25
Sulfate (mg/L as $\text{SO}_4$ )	44	0	15.7	16.1	16.9	19	19.6	20	21.9	18.5	1.59
Chloride (mg/L as Cl)	45	0	8.21	15.8	16.6	17.3	18.9	21.9	34.9	18.6	4.78
Fluoride (mg/L as F)	44	0	0.46	0.56	0.62	0.67	0.71	0.74	0.83	0.66	0.08
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	25.2	26.9	27.6	30.2	31.4	32.6	36.9	30	3.06
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	10	0	0.22	0.23	0.29	0.31	0.39	0.6	0.6	0.36	0.13
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	11	<40	<40	<40	<40	53	66	100	49	17
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	45	38	<2	<2	<2	<2	<2	2	7	2	1
Barium ( $\mu\text{g/L}$ as Ba)	16	0	63	131	156	171	182	190	195	163	31
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	12	<50	<50	<50	<50	<50	<50	<50	<50	0
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	2	<1	--	1	1	2	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	16	10	<5	<5	<5	<5	20	32	99	16	24
Iron ( $\mu\text{g/L}$ as Fe)	20	7	<10	<10	<10	12	24	111	544	53	120
Lead ( $\mu\text{g/L}$ as Pb)	45	34	<2	<2	<2	<2	<2	8	25	4	5
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.03	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	20	15	<2	<2	<2	<2	<2	6	14	3	3
Nickel ( $\mu\text{g/L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	242	316	339	363	393	435	443	363	50
Vanadium ( $\mu\text{g/L}$ as V)	12	10	<10	<10	<10	<10	<10	10	21	11	3
Zinc ( $\mu\text{g/L}$ as Zn)	16	6	<5	<5	<5	8	24	146	162	29	50
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	14	<1	<1	<1	<1	<1	<1	1.47	1.03	0.12

**Table 44.--Construction information and summary statistics for water-quality data for Love 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'12"	Well capacity (gal/min): 1,630	Ground elevation (ft asl): 5,370
Longitude: 106°32'57"	Cased depth (ft bls): 1,284	Static water level (ft bls): 540
Date drilled: 1958	Screened interval (ft bls): 600-1,284	Static water level date: 4/12/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	32	0	240	270	323	364	382	394	473	354	57.4
pH, field (standard units)	33	0	7.3	7.53	7.6	7.7	7.82	7.95	8	7.71	0.18
pH, lab (standard units)	18	0	7.22	7.3	7.76	7.92	8	8.13	8.16	7.85	0.26
Eh, field (mV)	17	0	109	112	130	166	221	268	280	178	56
Temperature, field (deg C)	33	0	19.8	22	22.6	22.7	23	24.1	24.6	22.8	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	18	0	111	116	124	124	127	140	142	126	7.42
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	97.7	108	110	112	114	120	127	113	6
Langelier saturation index (standard units)	31	0	-0.41	-0.15	-0.07	0	0.19	0.3	0.4	0.04	0.2
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	156	212	222	235	242	292	308	236	29.3
Calcium (mg/L as Ca)	20	0	37	39.5	42.5	46.5	48.3	52.1	56.6	45.9	4.79
Calcium (mg/L as $\text{CaCO}_3$ )	32	0	92.7	103	112	115	119	136	146	117	12.3
Magnesium (mg/L as Mg)	19	0	2.08	2.16	2.45	2.6	2.76	2.79	2.8	2.58	0.2
Sodium (mg/L as Na)	21	0	22.4	23.7	25.9	27.6	28.7	32.9	36.7	28.1	3.63
Potassium (mg/L as K)	19	0	2.15	2.35	2.53	2.71	2.93	3.3	3.45	2.75	0.32
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	96.9	107	108	112	113	120	148	112	8.3
Carbonate (mg/L as $\text{CaCO}_3$ )	34	17	<1	<1	<1	<1	1.34	1.6	2.03	1.17	0.26
Sulfate (mg/L as $\text{SO}_4$ )	33	0	17.2	18	20.6	21.2	21.5	22.1	22.5	20.7	1.44
Chloride (mg/L as Cl)	34	0	12.4	30.9	32.8	35	36.9	41.9	69.6	36.8	10.5
Fluoride (mg/L as F)	32	0	0.32	0.41	0.45	0.48	0.5	0.53	0.8	0.49	0.09
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	24.8	25.5	27.4	29.8	32.7	34.5	37.2	30.1	3.73
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	2	<0.05	<0.05	0.24	0.31	0.37	0.58	0.59	0.3	0.18
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	81	42	10
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	34	19	<2	<2	<2	<2	2	3	4	2	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	156	163	177	200	210	233	242	196	25
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	4	<50	<50	<50	51	61	99	112	62	20
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	2	<1	--	1	1	2	--	2	1	1
Copper ( $\mu\text{g/L}$ as Cu)	17	12	<5	<5	<5	<5	6	12	15	7	3
Iron ( $\mu\text{g/L}$ as Fe)	21	12	<10	<10	<10	<10	13	17	32	13	5
Lead ( $\mu\text{g/L}$ as Pb)	33	27	<2	<2	<2	<2	<2	3	9	2	1
Lithium (mg/L as Li)	5	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	21	17	<2	<2	<2	<2	<2	2	4	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	369	401	434	466	511	643	735	489	92
Vanadium ( $\mu\text{g/L}$ as V)	13	11	<10	<10	<10	<10	<10	12	22	11	3
Zinc ( $\mu\text{g/L}$ as Zn)	17	9	<5	<5	<5	<5	13	90	113	19	32
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	14	<1	<1	<1	<1	<1	1.38	1.83	1.08	0.22

**Table 45.--Construction information and summary statistics for water-quality data for Love 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'50"	Well capacity (gal/min): 1,460	Ground elevation (ft asl): 5,390
Longitude: 106°32'40"	Cased depth (ft bls): 1,248	Static water level (ft bls): 552.03
Date drilled: 1958	Screened interval (ft bls): 660-1,248	Static water level date: 4/14/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	29	0	160	230	300	325	332	360	421	310	51.9
pH, field (standard units)	31	0	7.3	7.41	7.62	7.75	7.9	7.95	9.3	7.77	0.35
pH, lab (standard units)	17	0	7.04	7.69	7.84	7.95	8.02	8.12	8.14	7.89	0.25
Eh, field (mV)	16	0	-53	44	125	165	213	307	462	172	111
Temperature, field (deg C)	30	0	19.9	22	22.5	22.6	22.9	23.05	24	22.5	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	17	0	89.3	104	105	107	109	112	151	108	12
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	104	106	108	109	120	124	141	114	9.01
Langelier saturation index (standard units)	27	0	-0.4	-0.34	-0.11	-0.04	0.18	0.4	1.6	0.06	0.38
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	32	0	132	172	194	203	210	226	268	202	23.2
Calcium (mg/L as Ca)	21	0	31.2	36.9	37.6	38.8	39.5	41.1	47	38.8	3.37
Calcium (mg/L as $\text{CaCO}_3$ )	27	0	76.7	90	92	95.2	98.2	121	134	99.2	13
Magnesium (mg/L as Mg)	19	0	2.54	2.83	2.98	3.04	3.13	3.23	6.22	3.18	0.75
Sodium (mg/L as Na)	21	0	20.2	21.5	25.5	26.5	27.4	28.7	34.3	26.2	3.09
Potassium (mg/L as K)	19	0	1.96	2.22	2.44	2.66	3.04	3.08	3.22	2.7	0.35
Bicarbonate (mg/L as $\text{CaCO}_3$ )	32	0	103	106	107	108	119	127	141	113	10.3
Carbonate (mg/L as $\text{CaCO}_3$ )	32	20	<1	<1	<1	<1	1.2	1.63	2.03	1.16	0.29
Sulfate (mg/L as $\text{SO}_4$ )	32	0	14.1	16.3	19.1	19.6	20	23.9	47.6	21.1	6.67
Chloride (mg/L as Cl)	32	0	8.2	16.6	20.5	22.1	24.3	25.5	38	21.8	5.63
Fluoride (mg/L as F)	30	0	0.43	0.49	0.53	0.56	0.6	0.62	0.64	0.56	0.05
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	24.4	25.7	25.9	28.1	29.8	29.9	31.3	27.9	2.17
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	10	0	0.23	0.26	0.28	0.33	0.58	0.66	0.69	0.41	0.16
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	18	16	<40	<40	<40	<40	<40	52	119	45	19
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	32	27	<2	<2	<2	<2	<2	2	3	2	0
Barium ( $\mu\text{g}/\text{L}$ as Ba)	18	0	129	142	152	155	170	205	280	166	34
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	13	7	<50	<50	<50	<50	66	75	113	61	18
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	1	<1	--	1	2	2	--	2	2	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	18	13	<5	<5	<5	<5	5	22	71	10	16
Iron ( $\mu\text{g}/\text{L}$ as Fe)	21	7	<10	<10	<10	13	19	25	1090	66	234
Lead ( $\mu\text{g}/\text{L}$ as Pb)	31	28	<2	<2	<2	<2	<2	<2	11	2	2
Lithium (mg/L as Li)	5	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	21	17	<2	<2	<2	<2	<2	2	24	4	6
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	18	0	325	336	353	368	408	457	464	380	41
Vanadium ( $\mu\text{g}/\text{L}$ as V)	14	11	<10	<10	<10	<10	<10	15	20	11	3
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	18	10	<5	<5	<5	<5	8	18	51	10	11
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	15	<1	<1	<1	<1	<1	1.14	1.34	1.03	0.09

**Table 46.--Construction information and summary statistics for water-quality data for Love 6**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'53"	Well capacity (gal/min): 930	Ground elevation (ft asl): 5,505
Longitude: 106°31'38"	Cased depth (ft bls): 1,521	Static water level (ft bls): 651.33
Date drilled: 1973	Screened interval (ft bls): 753-1,509	Static water level date: 1/8/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	24	0	180	190	214	260	268	271	278	243	33.3
pH, field (standard units)	24	0	7.33	7.52	7.74	7.91	8.08	8.11	8.2	7.87	0.23
pH, lab (standard units)	14	0	7.45	7.6	7.76	8.06	8.09	8.1	8.11	7.95	0.22
Eh, field (mV)	14	0	39	103	141	168	206	402	513	200	122
Temperature, field (deg C)	23	0	21	24.5	25.1	25.3	25.4	26	26	25.1	1
Hardness (mg/L as $\text{CaCO}_3$ )	13	0	53.6	61.1	63.8	65.3	67	69.3	70.3	64.8	4.35
Alkalinity (mg/L as $\text{CaCO}_3$ )	24	0	103	106	108	109	112	116	122	110	4.22
Langelier saturation index (standard units)	22	0	-0.6	-0.32	-0.21	0.03	0.1	0.2	0.22	-0.05	0.22
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	23	0	124	140	152	168	176	192	200	165	19.6
Calcium (mg/L as Ca)	17	0	19.3	22.8	24.1	24.4	25.8	27.2	32.9	25	2.73
Calcium (mg/L as $\text{CaCO}_3$ )	22	0	52.4	55.9	58	61.7	62.4	67	78	61.4	5.67
Magnesium (mg/L as Mg)	15	0	0.83	0.95	0.97	1.03	1.05	1.14	1.49	1.05	0.14
Sodium (mg/L as Na)	17	0	26.2	28.1	31.5	33.1	33.7	35	39.6	32.8	2.87
Potassium (mg/L as K)	15	0	1.41	1.47	1.52	1.59	1.77	1.8	1.98	1.64	0.15
Bicarbonate (mg/L as $\text{CaCO}_3$ )	24	0	101	105	107	108	111	116	121	109	4.53
Carbonate (mg/L as $\text{CaCO}_3$ )	24	8	<1	<1	<1	1.16	1.28	1.83	2.38	1.25	0.35
Sulfate (mg/L as $\text{SO}_4$ )	24	0	13.8	14.1	16.1	16.8	17	17.2	19.4	16.3	1.34
Chloride (mg/L as Cl)	24	1	<4	4.01	4.1	4.79	5.43	5.54	6.21	4.81	0.69
Fluoride (mg/L as F)	22	0	0.6	0.8	0.83	0.87	0.92	0.94	1.14	0.86	0.1
Bromide (mg/L as Br)	5	5	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	9	0	24.7	--	27.6	29.1	30.6	--	31.5	28.8	2.25
<b>Nutrients</b>											
Nitrite (mg/L as N)	5	5	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	7	0	0.35	--	0.36	0.43	0.6	--	0.61	0.46	0.11
Orthophosphate (mg/L as P)	5	5	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	13	12	<40	<40	<40	<40	<40	<40	115	46	21
Antimony ( $\mu\text{g/L}$ as Sb)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	25	15	<2	<2	<2	<2	2	3	3	2	0
Barium ( $\mu\text{g/L}$ as Ba)	13	0	83	83	86	96	110	117	132	99	15
Beryllium ( $\mu\text{g/L}$ as Be)	5	5	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	9	8	<50	--	<50	<50	<50	--	67	52	6
Cadmium ( $\mu\text{g/L}$ as Cd)	5	4	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	5	2	<1	--	<1	1	1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	13	10	<5	<5	<5	<5	<5	19	39	9	10
Iron ( $\mu\text{g/L}$ as Fe)	17	6	<10	<10	<10	11	15	21	120	19	26
Lead ( $\mu\text{g/L}$ as Pb)	24	18	<2	<2	<2	<2	<2	3	6	2	1
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	17	15	<2	<2	<2	<2	<2	2	79	7	19
Nickel ( $\mu\text{g/L}$ as Ni)	11	11	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	6	5	<2	--	<2	<2	<2	--	2	2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	13	0	175	183	192	202	218	233	260	205	23
Vanadium ( $\mu\text{g/L}$ as V)	9	9	<10	--	<10	<10	<10	--	<10	<10	0
Zinc ( $\mu\text{g/L}$ as Zn)	12	7	<5	<5	<5	<5	8	13	14	7	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	11	7	<1	<1	<1	<1	1.27	1.68	1.85	1.17	0.31

**Table 47.--Construction information and summary statistics for water-quality data for Love 7**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'08"	Well capacity (gal/min): 2,070	Ground elevation (ft asl): 5,440
Longitude: 106°32'13"	Cased depth (ft bls): 1,485	Static water level (ft bls): 581
Date drilled: 1973	Screened interval (ft bls): 645-1,473	Static water level date: 4/5/94

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	33	0	172	220	270	326	332	336	345	300	47.2
pH, field (standard units)	33	0	7.17	7.37	7.49	7.71	7.8	7.9	8	7.64	0.22
pH, lab (standard units)	18	0	7.11	7.82	7.9	7.99	8.01	8.04	8.13	7.92	0.22
Eh, field (mV)	17	0	88	88	141	170	202	205	386	170	68
Temperature, field (deg C)	33	0	23	24	24	24	24.2	25	25.2	24.2	0.5
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	55.3	94	104	106	108	110	115	103	13.4
Alkalinity (mg/L as $\text{CaCO}_3$ )	34	0	92.7	103	103	106	111	114	118	106	5.34
Langelier saturation index (standard units)	30	0	-0.53	-0.43	-0.24	-0.05	0.1	0.2	0.3	-0.09	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	33	0	100	180	195	204	212	216	240	200	23.3
Calcium (mg/L as Ca)	20	0	35.2	37	39	40.3	43.2	45.5	46	40.9	3.12
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	88	94.1	97.5	99.5	102	105	126	100	7.13
Magnesium (mg/L as Mg)	19	0	0.93	1.3	1.42	1.63	1.67	1.71	1.72	1.55	0.2
Sodium (mg/L as Na)	21	0	19.7	22.2	24.1	26.4	27.2	29.3	30.1	25.8	2.64
Potassium (mg/L as K)	19	1	<1	1.54	1.98	2.21	2.29	2.62	2.84	2.13	0.4
Bicarbonate (mg/L as $\text{CaCO}_3$ )	33	0	91.7	102	102	104	110	114	116	105	5.52
Carbonate (mg/L as $\text{CaCO}_3$ )	33	21	<1	<1	<1	<1	1.01	1.47	1.55	1.07	0.17
Sulfate (mg/L as $\text{SO}_4$ )	32	0	15.7	16.2	18.6	19.1	19.4	20.2	20.7	18.8	1.36
Chloride (mg/L as Cl)	34	0	21.9	22.5	23.6	25	26.6	28.7	32.3	25.2	2.38
Fluoride (mg/L as F)	32	0	0.45	0.55	0.56	0.6	0.65	0.67	0.75	0.61	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	27.6	28	29	30.6	32.8	33.2	37	31	2.68
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.16	0.06	0.04
Nitrate (mg/L as N)	10	0	0.16	0.18	0.2	0.25	0.32	0.54	0.56	0.29	0.14
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	103	44	15
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	34	0	3	3	4	4	5	5	6	4	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	17	0	160	167	176	184	197	213	254	188	22
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	11	<50	<50	<50	<50	<50	<50	58	51	2
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	2	<1	--	<1	1	2	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	11	<5	<5	<5	<5	7	15	35	8	7
Iron ( $\mu\text{g}/\text{L}$ as Fe)	21	6	<10	<10	<10	13	17	68	312	36	68
Lead ( $\mu\text{g}/\text{L}$ as Pb)	33	29	<2	<2	<2	<2	<2	2	5	2	1
Lithium (mg/L as Li)	4	0	0.01	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	21	0	2	4	5	6	7	8	17	6	3
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	3	2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	346	378	383	400	439	479	480	411	40
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	11	<10	<10	<10	<10	<10	10	12	10	1
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	10	<5	<5	<5	<5	8	44	54	12	15
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	12	<1	<1	<1	<1	<1	1.4	1.64	1.07	0.19

**Table 48.--Construction information and summary statistics for water-quality data for Love 8**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'39"	Well capacity (gal/min): 2,510	Ground elevation (ft asl): 5,316
Longitude: 106°33'30"	Cased depth (ft bls): 1,455	Static water level (ft bls): 463.30
Date drilled: 1989	Screened interval (ft bls): 640-1,440	Static water level date: 1/12/98

**Summary statistics (data from 1990 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	15	0	315	338	367	440	456	504	512	428	59
pH, field (standard units)	15	0	7.15	7.26	7.35	7.67	7.72	7.8	7.81	7.59	0.21
pH, lab (standard units)	13	0	7.11	7.37	7.81	7.87	7.93	7.97	8.12	7.79	0.27
Eh, field (mV)	13	0	106	110	135	179	194	221	363	180	66
Temperature, field (deg C)	15	0	20.8	21.3	21.6	21.7	21.9	22.5	22.9	21.8	0.5
Hardness (mg/L as $\text{CaCO}_3$ )	13	0	126	133	136	140	142	154	164	141	9.53
Alkalinity (mg/L as $\text{CaCO}_3$ )	15	0	109	111	112	114	115	115	120	113	2.5
Langelier saturation index (standard units)	13	0	-0.51	-0.44	-0.31	0	0.04	0.14	0.19	-0.1	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	15	0	252	256	264	276	295	320	336	282	24.9
Calcium (mg/L as Ca)	14	0	44.2	47.2	48.6	49.8	51.5	56.8	59.7	50.4	3.84
Calcium (mg/L as $\text{CaCO}_3$ )	14	0	101	114	120	126	127	133	142	124	9.38
Magnesium (mg/L as Mg)	14	0	4.31	4.35	4.57	4.63	4.81	5.55	6.5	4.83	0.6
Sodium (mg/L as Na)	14	0	30.6	31.6	32.4	33.7	35.1	37.3	37.9	34	2.14
Potassium (mg/L as K)	14	0	2.54	2.62	2.83	3.02	3.16	3.76	3.87	3.05	0.38
Bicarbonate (mg/L as $\text{CaCO}_3$ )	15	0	109	111	111	113	114	114	119	113	2.34
Carbonate (mg/L as $\text{CaCO}_3$ )	15	14	<1	<1	<1	<1	<1	<1	1.41	1.03	0.11
Sulfate (mg/L as $\text{SO}_4$ )	15	0	21.4	21.4	23.4	25.7	26.8	27.8	29.1	25.3	2.25
Chloride (mg/L as Cl)	15	0	18.2	36.8	46.7	49	56.9	69.2	74.4	50.7	13.5
Fluoride (mg/L as F)	15	0	0.33	0.34	0.35	0.37	0.41	0.44	0.51	0.38	0.05
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	9	0	28.3	--	30	33.9	41.4	--	44.3	34.8	6.2
<b>Nutrients</b>											
Nitrite (mg/L as N)	7	6	<0.05	--	<0.05	<0.05	<0.05	--	0.36	0.09	0.12
Nitrate (mg/L as N)	8	1	<0.05	--	0.13	0.17	0.32	--	0.48	0.22	0.16
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	12	12	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	15	11	<2	<2	<2	<2	2	3	4	2	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	12	0	172	176	179	182	205	216	218	190	16
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	0	56	72	78	93	106	115	132	92	21
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	7	3	<0.1	--	<0.1	0.1	0.1	--	0.3	0.1	0.1
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	7	2	<1	--	<1	2	2	--	3	2	1
Copper ( $\mu\text{g}/\text{L}$ as Cu)	12	10	<5	<5	<5	<5	<5	5	13	6	2
Iron ( $\mu\text{g}/\text{L}$ as Fe)	14	5	<10	<10	<10	16	23	41	602	60	156
Lead ( $\mu\text{g}/\text{L}$ as Pb)	15	13	<2	<2	<2	<2	<2	2	31	4	8
Lithium (mg/L as Li)	3	0	0.02	--	--	0.02	--	--	0.03	0.02	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	14	6	<2	<2	<2	2	2	3	7	2	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	10	9	<5	<5	<5	<5	<5	10	15	6	3
Selenium ( $\mu\text{g}/\text{L}$ as Se)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	3	3	<2	--	--	<2	--	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	12	0	340	354	363	397	480	487	661	429	91
Vanadium ( $\mu\text{g}/\text{L}$ as V)	10	9	<10	<10	<10	<10	<10	10	10	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	12	0	8	8	9	13	20	49	1440	134	410
<b>Carbon</b>											
Total organic carbon (mg/L as C)	11	7	<1	<1	<1	<1	1.21	1.63	1.82	1.16	0.29

**Table 49.--Construction information and summary statistics for water-quality data for Miles 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'07"	Well capacity (gal/min): 2,570	Ground elevation (ft asl): 5,154
Longitude: 106°37'48"	Cased depth (ft bls): 1,165	Static water level (ft bls): 260.70
Date drilled: 1974	Screened interval (ft bls): 404-1,153	Static water level date: 12/15/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	41	0	187	340	399	424	441	448	485	407	55.7
pH, field (standard units)	41	0	7.32	7.57	7.68	7.88	7.99	8.01	8.14	7.82	0.19
pH, lab (standard units)	23	0	7.82	7.91	7.95	7.98	8.04	8.08	8.13	7.99	0.08
Eh, field (mV)	24	0	48	109	140	169	211	272	502	191	102
Temperature, field (deg C)	41	0	21	24	25	25.5	25.7	25.8	26	25.1	1.1
Hardness (mg/L as $\text{CaCO}_3$ )	20	0	96	108	113	114	118	120	126	114	5.95
Alkalinity (mg/L as $\text{CaCO}_3$ )	38	0	102	106	107	109	112	120	182	112	12.9
Langelier saturation index (standard units)	36	0	-0.45	-0.27	-0.08	0.07	0.2	0.3	0.4	0.04	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	40	0	246	272	291	305	318	333	344	303	22.3
Calcium (mg/L as Ca)	27	0	25	30.8	32.9	34.9	36.4	38	40.6	34.3	3.34
Calcium (mg/L as $\text{CaCO}_3$ )	36	0	76.2	81.6	86	89	93.8	106	126	91.5	10.7
Magnesium (mg/L as Mg)	25	0	3.37	6.02	6.75	7.5	7.73	8.15	8.31	7.13	1.07
Sodium (mg/L as Na)	27	0	18.7	27	35.7	41	43	46	47.6	38.9	6.74
Potassium (mg/L as K)	25	0	3.19	5.95	6.69	7.39	7.78	7.86	8.99	7.06	1.17
Bicarbonate (mg/L as $\text{CaCO}_3$ )	39	0	101	105	106	107	112	120	181	111	12.9
Carbonate (mg/L as $\text{CaCO}_3$ )	40	22	<1	<1	<1	<1	1.1	1.36	1.87	1.11	0.2
Sulfate (mg/L as $\text{SO}_4$ )	40	0	32	34.9	37.7	39	42.7	46.7	55.9	40.2	4.74
Chloride (mg/L as Cl)	40	1	<4	33	37.4	38.6	39.8	40.8	64.9	37.6	7.82
Fluoride (mg/L as F)	39	0	0.58	0.61	0.65	0.69	0.73	0.76	0.86	0.69	0.06
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	18	0	35.1	55.1	63.7	71	73.4	76.9	85.3	67.7	10.9
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	16	0	0.22	0.27	0.28	0.29	0.35	0.4	0.59	0.32	0.08
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	15	<40	<40	<40	<40	<40	73	173	50	33
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	42	0	4	14	15	16	17	19	21	16	3
Barium ( $\mu\text{g/L}$ as Ba)	17	0	72	74	83	89	97	109	118	91	12
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	95	104	113	130	156	171	187	135	28
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	1	--	1	1	2	--	5	2	1
Copper ( $\mu\text{g/L}$ as Cu)	17	9	<5	<5	<5	<5	8	16	16	8	4
Iron ( $\mu\text{g/L}$ as Fe)	28	13	<10	<10	<10	11	19	48	166	23	34
Lead ( $\mu\text{g/L}$ as Pb)	40	35	<2	<2	<2	<2	<2	2	12	2	2
Lithium (mg/L as Li)	4	0	0.05	--	0.05	0.06	0.07	--	0.07	0.06	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	28	23	<2	<2	<2	<2	<2	6	10	3	2
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	4	2	1
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	316	324	370	399	430	468	472	398	48
Vanadium ( $\mu\text{g/L}$ as V)	13	3	<10	<10	10	15	16	22	34	16	7
Zinc ( $\mu\text{g/L}$ as Zn)	17	6	<5	<5	<5	7	16	33	47	13	12
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.2	1.24	1.03	0.08

**Table 50.--Construction information and summary statistics for water-quality data for Ponderosa 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°09'33"	Well capacity (gal/min): 1,740	Ground elevation (ft asl): 5,649
Longitude: 106°31'56"	Cased depth (ft bls): 1,704	Static water level (ft bls): 762.46
Date drilled: 1979	Screened interval (ft bls): 964-1,693	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	76	0	380	440	520	582	591	599	630	550	63.3
pH, field (standard units)	78	0	7	7.36	7.54	7.63	7.8	7.9	8	7.63	0.21
pH, lab (standard units)	42	0	7.18	7.61	7.73	7.81	7.88	7.99	8.11	7.8	0.16
Eh, field (mV)	35	0	37	86	123	171	211	248	631	185	118
Temperature, field (deg C)	78	0	14.5	24	26	26.8	26.9	27	29.5	25.9	2.7
Hardness (mg/L as $\text{CaCO}_3$ )	36	0	102	114	146	149	151	152	186	145	15.4
Alkalinity (mg/L as $\text{CaCO}_3$ )	77	0	107	117	118	122	125	130	135	122	5.09
Langelier saturation index (standard units)	74	0	-2.3	-0.19	-0.01	0.1	0.2	0.4	0.7	0.06	0.38
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	77	0	240	315	332	344	352	360	392	341	22.9
Calcium (mg/L as Ca)	39	0	38.7	41.8	51.6	55	56.9	62.1	70.4	54.2	6.69
Calcium (mg/L as $\text{CaCO}_3$ )	73	0	96	133	136	141	144	162	190	142	16.9
Magnesium (mg/L as Mg)	37	0	1.04	1.61	2.37	2.49	2.6	2.75	6.76	2.47	0.87
Sodium (mg/L as Na)	39	0	36.8	47.6	53	56	59.4	67.6	70.7	56.1	7.66
Potassium (mg/L as K)	37	0	2.36	3.61	3.92	4.1	4.3	4.8	5.37	4.09	0.58
Bicarbonate (mg/L as $\text{CaCO}_3$ )	78	0	106	116	117	121	124	128	135	121	5.41
Carbonate (mg/L as $\text{CaCO}_3$ )	78	49	<1	<1	<1	<1	1.12	1.73	2.71	1.16	0.33
Sulfate (mg/L as $\text{SO}_4$ )	77	0	23.3	30.1	31.1	31.7	32.5	34	36.3	31.6	2.03
Chloride (mg/L as Cl)	79	0	4	68.7	80.1	83.6	87.2	90.1	101	79.9	16.8
Fluoride (mg/L as F)	75	0	0.45	0.52	0.55	0.59	0.63	0.66	1.03	0.6	0.08
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	32	0	27.1	29.3	33.2	34.6	37	42.4	45.8	35.3	4.69
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	30	14	<0.05	<0.05	<0.05	0.1	0.22	0.47	0.71	0.17	0.19
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	15	14	<40	<40	<40	<40	<40	<40	80	43	10
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	80	1	<2	16	17	18	20	22	39	19	4
Barium ( $\mu\text{g/L}$ as Ba)	15	0	115	154	171	193	211	257	318	198	47
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	0	77	92	113	132	165	166	179	134	32
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	6	<1	--	<1	<1	1	--	3	1	1
Copper ( $\mu\text{g/L}$ as Cu)	15	10	<5	<5	<5	<5	6	7	9	6	1
Iron ( $\mu\text{g/L}$ as Fe)	40	20	<10	<10	<10	<10	17	52	184	22	32
Lead ( $\mu\text{g/L}$ as Pb)	78	71	<2	<2	<2	<2	<2	<2	8	2	1
Lithium (mg/L as Li)	2	0	0.04	--	--	0.05	--	--	0.05	0.05	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	40	27	<2	<2	<2	<2	2	4	61	4	10
Nickel ( $\mu\text{g/L}$ as Ni)	13	13	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	5	5	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	15	0	376	491	575	635	683	814	842	637	123
Vanadium ( $\mu\text{g/L}$ as V)	11	10	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	15	4	<5	<5	<5	6	10	20	51	11	12
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	12	<1	<1	<1	<1	<1	1.03	1.92	1.07	0.25

**Table 51.--Construction information and summary statistics for water-quality data for Ponderosa 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'02"	Well capacity (gal/min): 1,940	Ground elevation (ft asl): 5,600
Longitude: 106°31'52"	Cased depth (ft bls): 1,581	Static water level (ft bls): 735.64
Date drilled: 1973	Screened interval (ft bls): 801-1,569	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	81	0	166	233	290	328	364	377	397	319	52.9
pH, field (standard units)	84	0	7.08	7.48	7.63	7.75	7.9	8	8.1	7.74	0.2
pH, lab (standard units)	45	0	7.11	7.68	7.81	7.87	7.94	8	8.28	7.84	0.19
Eh, field (mV)	39	0	30	87	118	159	210	383	686	190	123
Temperature, field (deg C)	84	0	13	24	25	25.4	25.6	25.7	26.2	24.9	1.9
Hardness (mg/L as $\text{CaCO}_3$ )	35	0	109	111	113	116	119	132	150	118	8.53
Alkalinity (mg/L as $\text{CaCO}_3$ )	83	0	97.1	105	107	109	117	121	129	111	6.67
Langelier saturation index (standard units)	78	0	-0.6	-0.22	-0.09	0.03	0.2	0.3	0.5	0.04	0.2
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	83	0	170	182	198	210	232	240	292	212	23.5
Calcium (mg/L as Ca)	40	0	30	38.2	41.1	42.6	43.8	44.6	47.9	42.1	3.02
Calcium (mg/L as $\text{CaCO}_3$ )	78	0	64.4	94.1	100	104	110	114	147	105	11.2
Magnesium (mg/L as Mg)	38	0	1.1	1.45	1.64	1.71	1.76	1.81	1.92	1.67	0.16
Sodium (mg/L as Na)	40	0	19.9	23.9	25.6	27	27.9	28.9	31.8	26.6	2.29
Potassium (mg/L as K)	38	1	<1	1.48	1.75	1.88	2.02	2.18	2.36	1.86	0.28
Bicarbonate (mg/L as $\text{CaCO}_3$ )	83	0	96.6	104	106	108	116	120	128	110	6.66
Carbonate (mg/L as $\text{CaCO}_3$ )	83	59	<1	<1	<1	<1	1.04	1.62	2.34	1.13	0.28
Sulfate (mg/L as $\text{SO}_4$ )	82	0	16.2	18.5	19.2	19.6	20	20.5	24.3	19.6	1.24
Chloride (mg/L as Cl)	83	0	8.64	17	18.2	23.5	33	37.7	46.1	25.3	8.52
Fluoride (mg/L as F)	78	0	0.45	0.71	0.75	0.79	0.85	0.89	1.01	0.8	0.08
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	31	0	26.3	27.9	28.8	30.4	32.3	32.9	34.3	30.5	2.03
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	30	1	<0.05	0.15	0.18	0.19	0.21	0.23	0.52	0.2	0.07
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	85	0	2	5	5	6	6	7	14	6	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	17	0	125	133	141	154	170	192	230	160	26
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	10	<50	<50	<50	<50	<50	<50	66	51	5
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	5	<1	--	<1	<1	1	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	17	<5	<5	<5	<5	<5	<5	<5	<5	0
Iron ( $\mu\text{g}/\text{L}$ as Fe)	41	25	<10	<10	<10	<10	11	16	159	16	23
Lead ( $\mu\text{g}/\text{L}$ as Pb)	83	67	<2	<2	<2	<2	<2	3	43	3	6
Lithium (mg/L as Li)	5	0	0.02	--	0.03	0.03	0.03	--	0.04	0.03	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	41	4	<2	2	2	3	4	5	7	3	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	8	<2	--	<2	<2	<2	--	4	2	1
Silver ( $\mu\text{g}/\text{L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	226	235	263	287	303	341	345	287	36
Vanadium ( $\mu\text{g}/\text{L}$ as V)	14	13	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	7	<5	<5	<5	6	8	21	170	17	40
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	14	<1	<1	<1	<1	<1	1.06	1.48	1.03	0.12

**Table 52.--Construction information and summary statistics for water-quality data for Ponderosa 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°08'21"	Well capacity (gal/min): 2,180	Ground elevation (ft asl): 5,527
Longitude: 106°32'10"	Cased depth (ft bls): 1,602	Static water level (ft bls): 667
Date drilled: 1977	Screened interval (ft bls): 870-1,590	Static water level date: 2/27/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	94	0	300	500	583	630	640	645	683	596	71.6
pH, field (standard units)	94	0	6.76	7.21	7.44	7.56	7.69	7.72	7.9	7.53	0.22
pH, lab (standard units)	70	0	7.3	7.61	7.73	7.8	7.89	7.97	8.09	7.8	0.14
Eh, field (mV)	63	0	-2	65	112	145	195	350	636	176	119
Temperature, field (deg C)	94	0	21	27	28	28.1	28.3	28.9	29.6	27.9	1.2
Hardness (mg/L as $\text{CaCO}_3$ )	58	0	140	148	169	171	175	178	209	170	12.4
Alkalinity (mg/L as $\text{CaCO}_3$ )	92	0	112	129	131	133	136	141	148	133	5.31
Langelier saturation index (standard units)	90	0	-2.5	-0.23	0	0.1	0.21	0.38	0.6	0.07	0.36
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	93	0	170	348	360	380	388	396	408	372	28.6
Calcium (mg/L as Ca)	63	0	28	49.7	54.5	58.1	61.8	65.4	74.1	57.8	7.12
Calcium (mg/L as $\text{CaCO}_3$ )	89	0	101	122	144	153	160	164	205	150	19.2
Magnesium (mg/L as Mg)	61	0	2.3	5.38	5.62	5.86	6.29	7.06	8.55	5.99	0.85
Sodium (mg/L as Na)	63	0	19.7	47.5	50.7	54.6	56.3	61.6	67.9	53.7	6.89
Potassium (mg/L as K)	61	0	1.9	4.31	4.46	4.89	5.21	5.83	7.86	4.97	0.82
Bicarbonate (mg/L as $\text{CaCO}_3$ )	92	0	112	128	130	132	135	140	148	132	5.34
Carbonate (mg/L as $\text{CaCO}_3$ )	93	65	<1	<1	<1	<1	1.03	1.33	2.04	1.1	0.23
Sulfate (mg/L as $\text{SO}_4$ )	91	0	18.8	30.2	34.2	35.1	36.3	36.8	38.5	34.5	3.13
Chloride (mg/L as Cl)	92	0	21.6	74.8	86	90.2	93.1	96.3	204	88.7	18.3
Fluoride (mg/L as F)	92	0	0.39	0.57	0.59	0.63	0.68	0.73	0.86	0.64	0.07
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	55	0	19.1	35.2	37.8	39.7	42	44.4	54.2	39.6	4.64
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	45	44	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.22	0.05	0.03
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	15	<40	<40	<40	<40	<40	43	87	43	11
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	95	0	14	21	22	23	26	31	42	25	5
Barium ( $\mu\text{g/L}$ as Ba)	17	0	151	156	167	194	210	237	310	197	39
Beryllium ( $\mu\text{g/L}$ as Be)	9	8	<1	--	<1	<1	<1	--	2	1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	173	183	201	226	267	284	292	229	38
Cadmium ( $\mu\text{g/L}$ as Cd)	9	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	8	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	12	<5	<5	<5	<5	6	23	41	9	10
Iron ( $\mu\text{g/L}$ as Fe)	64	2	<10	13	16	19	33	51	241	32	36
Lead ( $\mu\text{g/L}$ as Pb)	93	84	<2	<2	<2	<2	<2	<2	27	2	3
Lithium (mg/L as Li)	4	0	0.06	--	0.06	0.07	0.1	--	0.12	0.08	0.03
Manganese ( $\mu\text{g/L}$ as Mn)	64	0	11	22	27	29	32	33	48	29	5
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	415	447	504	539	618	667	697	553	82
Vanadium ( $\mu\text{g/L}$ as V)	13	13	<10	<10	<10	<10	<10	<10	<10	<10	0
Zinc ( $\mu\text{g/L}$ as Zn)	17	5	<5	<5	<5	7	14	25	36	11	8
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	11	<1	<1	<1	<1	1.07	1.98	2.72	1.21	0.48

**Table 53.--Construction information and summary statistics for water-quality data for Ponderosa 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'36"	Well capacity (gal/min): 1,460	Ground elevation (ft asl): 5,629
Longitude: 106°31'48"	Cased depth (ft bls): 1,549	Static water level (ft bls): 766.50
Date drilled: 1979	Screened interval (ft bls): 936-1,738	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	111	0	101	260	304	352	399	411	501	344	64.3
pH, field (standard units)	117	0	7.02	7.38	7.59	7.75	7.9	8.07	8.6	7.74	0.26
pH, lab (standard units)	76	0	7.1	7.72	7.82	7.91	8	8.06	8.2	7.88	0.19
Eh, field (mV)	68	0	-61	94	121	147	194	339	628	175	104
Temperature, field (deg C)	117	0	13	25	26	26.3	26.4	26.5	27.8	25.7	2
Hardness (mg/L as $\text{CaCO}_3$ )	56	0	82	106	109	113	116	118	154	113	9.78
Alkalinity (mg/L as $\text{CaCO}_3$ )	116	0	102	106	109	112	115	123	147	114	7.6
Langelier saturation index (standard units)	112	0	-1.7	-0.34	-0.11	0.02	0.15	0.39	0.9	0.01	0.31
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	115	0	165	190	208	224	240	252	376	225	27.9
Calcium (mg/L as Ca)	60	0	22.4	35.6	40.5	42	44.2	46.9	56	41.7	5.15
Calcium (mg/L as $\text{CaCO}_3$ )	109	0	54.7	86.1	91.8	101	107	112	128	99.2	11.9
Magnesium (mg/L as Mg)	58	0	0.71	1.36	1.51	1.6	1.68	1.81	7.83	1.72	0.88
Sodium (mg/L as Na)	60	0	14.6	30.2	32.3	35	36.5	38.7	67.2	35.3	7.31
Potassium (mg/L as K)	58	2	<1	1.58	1.76	1.87	2.05	2.22	5.87	1.94	0.6
Bicarbonate (mg/L as $\text{CaCO}_3$ )	116	0	101	105	108	110	114	123	147	113	7.71
Carbonate (mg/L as $\text{CaCO}_3$ )	116	70	<1	<1	<1	<1	1.16	1.64	2.1	1.14	0.27
Sulfate (mg/L as $\text{SO}_4$ )	115	0	14.5	16	18.2	19	19.5	19.8	41.6	19.1	3.31
Chloride (mg/L as Cl)	116	0	8.81	19.5	22	33.3	42.1	44.6	87.9	33	12.8
Fluoride (mg/L as F)	111	0	0.75	0.9	0.93	0.98	1.04	1.08	1.9	0.99	0.12
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	51	0	14.9	27	28.4	30.1	31.8	33.2	41.3	30	3.55
<b>Nutrients</b>											
Nitrite (mg/L as N)	7	7	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	40	7	<0.05	<0.05	0.14	0.16	0.25	0.28	0.49	0.18	0.11
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	102	44	16
Antimony ( $\mu\text{g/L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	118	0	5	11	13	14	15	17	43	14	4
Barium ( $\mu\text{g/L}$ as Ba)	16	0	100	101	107	121	130	144	186	123	21
Beryllium ( $\mu\text{g/L}$ as Be)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	9	<50	<50	<50	<50	<50	65	70	53	7
Cadmium ( $\mu\text{g/L}$ as Cd)	7	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	7	5	<1	--	<1	<1	1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	16	13	<5	<5	<5	<5	<5	8	23	6	5
Iron ( $\mu\text{g/L}$ as Fe)	60	37	<10	<10	<10	<10	13	26	304	19	39
Lead ( $\mu\text{g/L}$ as Pb)	116	101	<2	<2	<2	<2	<2	2	36	3	4
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.03	0.04	--	0.04	0.04	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	61	3	<2	4	6	7	9	11	131	11	18
Nickel ( $\mu\text{g/L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	226	229	237	268	306	322	337	274	36
Vanadium ( $\mu\text{g/L}$ as V)	12	11	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	16	5	<5	<5	<5	7	19	53	71	16	19
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	12	<1	<1	<1	<1	<1	1.23	1.36	1.04	0.11

**Table 54.--Construction information and summary statistics for water-quality data for Ponderosa 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°09'16"	Well capacity (gal/min): 1,900	Ground elevation (ft asl): 5,630
Longitude: 106°31'51"	Cased depth (ft bls): 1,626	Static water level (ft bls): 746.33
Date drilled: 1978	Screened interval (ft bls): 939-1,613	Static water level date: 1/9/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	112	0	217	320	392	445	460	468	480	418	57.3
pH, field (standard units)	115	0	7.19	7.49	7.59	7.69	7.81	8	8.4	7.71	0.23
pH, lab (standard units)	77	0	7.04	7.41	7.75	7.87	7.96	8.01	8.11	7.81	0.22
Eh, field (mV)	69	0	32	104	141	163	190	251	647	178	91
Temperature, field (deg C)	116	0	14	24	25.6	25.8	25.8	26	27.8	25.2	2.1
<b>Hardness (mg/L as CaCO<sub>3</sub>)</b>											
Hardness (mg/L as CaCO <sub>3</sub> )	61	0	90	134	136	139	141	144	185	138	11.4
<b>Alkalinity (mg/L as CaCO<sub>3</sub>)</b>											
Alkalinity (mg/L as CaCO <sub>3</sub> )	117	0	99.3	104	106	109	111	116	146	109	6
<b>Langelier saturation index (standard units)</b>											
Langelier saturation index (standard units)	110	0	-2.4	-0.16	-0.03	0.05	0.2	0.38	0.8	0.06	0.33
<b>Dissolved solids and major ions</b>											
<b>Dissolved solids (mg/L)</b>											
Dissolved solids (mg/L)	117	0	195	235	256	270	280	288	392	267	25.5
<b>Calcium (mg/L as Ca)</b>											
Calcium (mg/L as Ca)	66	0	33.5	47	49.7	52.1	54	57.9	71.8	51.8	5.76
<b>Calcium (mg/L as CaCO<sub>3</sub>)</b>											
Calcium (mg/L as CaCO <sub>3</sub> )	111	0	82	115	125	129	132	137	167	129	11.9
<b>Magnesium (mg/L as Mg)</b>											
Magnesium (mg/L as Mg)	64	0	1.09	1.77	1.96	2.07	2.11	2.19	2.5	2.02	0.23
<b>Sodium (mg/L as Na)</b>											
Sodium (mg/L as Na)	66	0	22.8	31.7	33.9	35.7	37.2	39	54.1	35.6	4.19
<b>Potassium (mg/L as K)</b>											
Potassium (mg/L as K)	64	1	<1	1.83	1.99	2.22	2.4	2.49	2.82	2.15	0.35
<b>Bicarbonate (mg/L as CaCO<sub>3</sub>)</b>											
Bicarbonate (mg/L as CaCO <sub>3</sub> )	118	0	98.2	102	105	108	110	116	144	109	5.94
<b>Carbonate (mg/L as CaCO<sub>3</sub>)</b>											
Carbonate (mg/L as CaCO <sub>3</sub> )	118	84	<1	<1	<1	<1	1.02	1.5	5.02	1.13	0.42
<b>Sulfate (mg/L as SO<sub>4</sub>)</b>											
Sulfate (mg/L as SO <sub>4</sub> )	117	0	11.5	19.9	22.3	23.3	25	26.1	34.5	23.4	2.94
<b>Chloride (mg/L as Cl)</b>											
Chloride (mg/L as Cl)	117	1	<4	47.4	52.2	55.8	57.6	59.8	131	54.3	12.4
<b>Fluoride (mg/L as F)</b>											
Fluoride (mg/L as F)	114	0	0.59	0.69	0.73	0.78	0.84	0.87	1.27	0.79	0.09
<b>Bromide (mg/L as Br)</b>											
Bromide (mg/L as Br)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Silica (mg/L as SiO<sub>2</sub>)</b>											
Silica (mg/L as SiO <sub>2</sub> )	57	0	23.7	28.2	29.5	31.1	32	33.3	39.6	30.8	2.68
<b>Nutrients</b>											
<b>Nitrite (mg/L as N)</b>											
Nitrite (mg/L as N)	8	6	<0.05	--	<0.05	<0.05	<0.05	--	0.38	0.09	0.12
<b>Nitrate (mg/L as N)</b>											
Nitrate (mg/L as N)	46	4	<0.05	0.07	0.15	0.18	0.26	0.3	0.49	0.2	0.1
<b>Orthophosphate (mg/L as P)</b>											
Orthophosphate (mg/L as P)	8	7	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
<b>Aluminum (<math>\mu\text{g}/\text{L}</math> as Al)</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	88	43	12
<b>Antimony (<math>\mu\text{g}/\text{L}</math> as Sb)</b>											
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
<b>Arsenic (<math>\mu\text{g}/\text{L}</math> as As)</b>											
Arsenic ( $\mu\text{g}/\text{L}$ as As)	119	0	4	20	23	25	27	30	91	26	8
<b>Barium (<math>\mu\text{g}/\text{L}</math> as Ba)</b>											
Barium ( $\mu\text{g}/\text{L}$ as Ba)	17	0	70	99	116	121	129	139	191	123	24
<b>Beryllium (<math>\mu\text{g}/\text{L}</math> as Be)</b>											
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
<b>Boron (<math>\mu\text{g}/\text{L}</math> as B)</b>											
Boron ( $\mu\text{g}/\text{L}$ as B)	12	6	<50	<50	<50	51	64	76	104	60	16
<b>Cadmium (<math>\mu\text{g}/\text{L}</math> as Cd)</b>											
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.2	0.1	0
<b>Chromium (<math>\mu\text{g}/\text{L}</math> as Cr)</b>											
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
<b>Copper (<math>\mu\text{g}/\text{L}</math> as Cu)</b>											
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	12	<5	<5	<5	<5	5	28	191	18	45
<b>Iron (<math>\mu\text{g}/\text{L}</math> as Fe)</b>											
Iron ( $\mu\text{g}/\text{L}$ as Fe)	66	39	<10	<10	<10	<10	12	17	293	20	42
<b>Lead (<math>\mu\text{g}/\text{L}</math> as Pb)</b>											
Lead ( $\mu\text{g}/\text{L}$ as Pb)	117	93	<2	<2	<2	<2	<2	3	21	3	3
<b>Lithium (mg/L as Li)</b>											
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.03	0.04	--	0.04	0.03	0
<b>Manganese (<math>\mu\text{g}/\text{L}</math> as Mn)</b>											
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	67	7	<2	<2	3	3	4	6	24	4	3
<b>Nickel (<math>\mu\text{g}/\text{L}</math> as Ni)</b>											
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	14	<5	<5	<5	<5	<5	<5	73	10	17
<b>Selenium (<math>\mu\text{g}/\text{L}</math> as Se)</b>											
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
<b>Silver (<math>\mu\text{g}/\text{L}</math> as Ag)</b>											
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
<b>Strontium (<math>\mu\text{g}/\text{L}</math> as Sr)</b>											
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	197	281	325	350	359	394	421	342	49
<b>Vanadium (<math>\mu\text{g}/\text{L}</math> as V)</b>											
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
<b>Zinc (<math>\mu\text{g}/\text{L}</math> as Zn)</b>											
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	11	<5	<5	<5	<5	7	10	10	6	2
<b>Carbon</b>											
<b>Total organic carbon (mg/L as C)</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.31	24.5	2.49	5.87

**Table 55.--Construction information and summary statistics for water-quality data for Ponderosa 6**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'52"	Well capacity (gal/min): 2,240	Ground elevation (ft asl): 5,558
Longitude: 106°32'20"	Cased depth (ft bls): 1,675	Static water level (ft bls): 672.42
Date drilled: 1979	Screened interval (ft bls): 852-1,662	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	107	0	247	477	546	634	647	658	698	599	76.2
pH, field (standard units)	110	0	7	7.41	7.5	7.59	7.7	7.83	8.1	7.6	0.19
pH, lab (standard units)	88	0	7.16	7.62	7.8	7.9	7.98	8.03	8.13	7.86	0.18
Eh, field (mV)	83	0	-11	59	100	134	180	241	619	149	96
Temperature, field (deg C)	110	0	24.7	26.7	27.5	27.8	28	28.5	29.2	27.7	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	70	0	134	141	150	153	157	161	170	153	7.3
Alkalinity (mg/L as $\text{CaCO}_3$ )	109	0	118	134	136	138	141	148	155	139	5.43
Langelier saturation index (standard units)	108	0	-2.3	-0.12	-0.01	0.09	0.2	0.4	0.7	0.09	0.32
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	110	0	288	365	375	384	388	396	420	379	18.6
Calcium (mg/L as Ca)	72	0	39.9	42.7	45.7	48.8	51.4	55	72.4	49.1	5.42
Calcium (mg/L as $\text{CaCO}_3$ )	107	0	82	110	122	128	139	150	167	129	15.8
Magnesium (mg/L as Mg)	71	0	4.46	6.19	6.73	7.14	7.74	8.01	9.77	7.15	0.85
Sodium (mg/L as Na)	72	0	46.8	56	60.9	65.1	67.5	71	83.2	64.4	6.62
Potassium (mg/L as K)	71	0	4.01	4.49	4.94	5.41	5.9	6.41	8.71	5.49	0.83
Bicarbonate (mg/L as $\text{CaCO}_3$ )	111	0	109	133	135	137	140	146	155	138	6.81
Carbonate (mg/L as $\text{CaCO}_3$ )	111	47	<1	<1	<1	1.03	1.27	1.46	4.49	1.18	0.37
Sulfate (mg/L as $\text{SO}_4$ )	109	0	26.1	30.6	35.3	36.7	37.5	38.3	47.6	36.2	3.21
Chloride (mg/L as Cl)	109	1	<4	78.7	85.9	87.8	91.1	96	187	87.3	22.8
Fluoride (mg/L as F)	110	0	0.7	0.88	0.92	0.97	1.04	1.15	1.28	0.99	0.11
Bromide (mg/L as Br)	9	8	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	65	0	33.3	36.8	40.1	42.9	44.6	47.2	55.9	42.4	4.28
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	7	<0.05	--	<0.05	<0.05	<0.05	--	0.15	0.06	0.03
Nitrate (mg/L as N)	54	52	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.2	0.05	0.02
Orthophosphate (mg/L as P)	9	8	<0.5	--	<0.5	<0.5	<0.5	--	0.5	0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	15	<40	<40	<40	<40	<40	42	58	41	4
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	10	9	<2	<2	<2	<2	<2	<2	2	2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	112	0	16	29	31	34	37	41	52	35	6
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	106	106	119	128	145	149	203	132	23
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	13	0	143	191	195	232	239	259	265	219	34
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	9	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	13	<5	<5	<5	<5	<5	8	10	6	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	72	3	<10	29	32	37	48	92	602	54	71
Lead ( $\mu\text{g}/\text{L}$ as Pb)	110	99	<2	<2	<2	<2	<2	<2	12	2	1
Lithium (mg/L as Li)	4	0	0.07	--	0.08	0.1	0.13	--	0.15	0.11	0.03
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	73	1	<2	39	51	56	61	68	84	55	12
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	14	<5	<5	<5	<5	<5	<5	10	5	1
Selenium ( $\mu\text{g}/\text{L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	380	381	405	415	446	485	499	429	37
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	13	<10	<10	<10	<10	<10	<10	<10	<10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	4	<5	<5	5	6	10	13	17	8	4
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	10	<1	<1	<1	<1	1.27	1.97	2.66	1.27	0.5

**Table 56.--Construction information and summary statistics for water-quality data for Ridgcrest 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'05"	Well capacity (gal/min): 1,660	Ground elevation (ft asl): 5,442
Longitude: 106°32'19"	Cased depth (ft bls): 1,260	Static water level (ft bls): 277
Date drilled: 1973	Screened interval (ft bls): 636-1,260	Static water level date: 4/10/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	32	0	260	299	311	400	428	445	510	379	71.4
pH, field (standard units)	33	0	6.96	7.04	7.35	7.53	7.77	7.9	8	7.52	0.29
pH, lab (standard units)	18	0	7.1	7.35	7.46	7.67	7.79	7.91	8.07	7.63	0.24
Eh, field (mV)	16	0	95	116	136	184	233	287	515	203	99
Temperature, field (deg C)	33	0	21.7	22	22.3	22.7	22.8	23	24	22.6	0.4
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	150	150	154	157	166	201	228	167	22
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	110	125	140	146	154	160	174	145	14.4
Langelier saturation index (standard units)	29	0	-0.47	-0.4	-0.22	-0.08	0.2	0.3	0.4	-0.04	0.25
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	192	230	252	265	276	302	376	268	34.7
Calcium (mg/L as Ca)	20	0	45.1	47	49.6	52.4	58.6	65.1	80.2	55.1	8.32
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	79.9	105	124	134	144	168	192	136	24.3
Magnesium (mg/L as Mg)	19	0	6.26	6.66	7.24	7.6	9.03	10	12.4	8.19	1.42
Sodium (mg/L as Na)	21	0	25.6	25.8	27.9	29	30.2	31.7	38.6	29.3	2.86
Potassium (mg/L as K)	19	0	1.64	2.05	2.33	2.46	2.71	2.85	3.02	2.46	0.31
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	108	122	139	146	154	159	186	146	16.1
Carbonate (mg/L as $\text{CaCO}_3$ )	34	22	<1	<1	<1	<1	1.32	1.44	2.29	1.15	0.27
Sulfate (mg/L as $\text{SO}_4$ )	32	0	31.3	45.2	49.7	51.8	55.6	59.4	92.5	53.4	10.6
Chloride (mg/L as Cl)	34	0	9.82	10.3	10.8	11.4	12.6	20.9	29.3	13.4	5.04
Fluoride (mg/L as F)	33	0	0.5	0.55	0.62	0.69	0.71	0.79	1.14	0.69	0.12
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	24.9	25	25	27	28.3	29.6	31	27.2	2.03
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.71	0.78	0.85	0.88	0.94	1.25	1.35	0.93	0.18
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	62	41	5
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	34	31	<2	<2	<2	<2	<2	<2	11	2	2
Barium ( $\mu\text{g}/\text{L}$ as Ba)	18	0	69	70	74	82	85	127	151	85	21
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	13	11	<50	<50	<50	<50	<50	51	64	51	4
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	5	<1	--	<1	<1	2	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	18	13	<5	<5	<5	<5	5	9	15	6	2
Iron ( $\mu\text{g}/\text{L}$ as Fe)	21	7	<10	<10	<10	11	13	21	581	42	124
Lead ( $\mu\text{g}/\text{L}$ as Pb)	33	30	<2	<2	<2	<2	<2	<2	5	2	1
Lithium (mg/L as Li)	5	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	21	15	<2	<2	<2	<2	2	2	4	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	8	<2	--	<2	<2	<2	--	3	2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	8	7	<2	--	<2	<2	<2	--	2	2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	18	0	228	233	255	279	316	389	406	295	52
Vanadium ( $\mu\text{g}/\text{L}$ as V)	14	12	<10	<10	<10	<10	<10	10	18	11	2
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	18	6	<5	<5	<5	7	14	84	314	30	73
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	11	<1	<1	<1	<1	1.35	1.94	2.03	1.25	0.39

**Table 57.--Construction information and summary statistics for water-quality data for Ridgecrest 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'24"	Well capacity (gal/min): 2,830	Ground elevation (ft asl): 5,416
Longitude: 106°32'35"	Cased depth (ft bls): 1,512	Static water level (ft bls): 566.42
Date drilled: 1977	Screened interval (ft bls): 730-1,500	Static water level date: 1/12/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	44	0	190	248	282	328	331	336	352	305	37.7
pH, field (standard units)	46	0	6.98	7.4	7.53	7.84	7.9	8	8.2	7.75	0.26
pH, lab (standard units)	30	0	7.16	7.33	7.52	7.82	8.02	8.07	8.14	7.76	0.29
Eh, field (mV)	28	0	121	131	148	178	212	269	388	190	60
Temperature, field (deg C)	46	0	19.7	23	23.5	23.8	23.9	24	27	23.6	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	18	0	87.4	94	95	97.6	101	104	106	97.9	4.31
Alkalinity (mg/L as $\text{CaCO}_3$ )	46	0	79	96.4	99	99.9	102	109	120	101	5.86
Langelier saturation index (standard units)	42	0	-0.84	-0.42	-0.32	-0.03	0.15	0.26	0.4	-0.08	0.28
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	47	0	152	176	185	198	210	225	240	199	18.5
Calcium (mg/L as Ca)	22	0	25.1	32.1	32.4	33.6	34.7	35.5	36.2	33.4	2.27
Calcium (mg/L as $\text{CaCO}_3$ )	43	0	70	82	84.7	88.3	93.2	106	110	90	9.11
Magnesium (mg/L as Mg)	21	0	2.15	3.12	3.16	3.25	3.35	3.42	3.54	3.21	0.29
Sodium (mg/L as Na)	23	0	19.2	25.7	26.5	27.7	28.7	31	32.6	27.7	2.6
Potassium (mg/L as K)	21	0	1.88	2.17	2.51	2.7	2.89	3.08	3.43	2.68	0.35
Bicarbonate (mg/L as $\text{CaCO}_3$ )	47	0	78	95.4	97.7	99.6	101	109	130	101	7.3
Carbonate (mg/L as $\text{CaCO}_3$ )	47	29	<1	<1	<1	<1	1.13	1.52	1.9	1.12	0.24
Sulfate (mg/L as $\text{SO}_4$ )	43	0	16.1	16.9	17.7	19.8	20.3	20.7	21.9	19.3	1.53
Chloride (mg/L as Cl)	46	0	10.9	25.1	25.8	27	28.9	31.8	54.5	27.9	7.03
Fluoride (mg/L as F)	45	0	0.52	0.59	0.63	0.69	0.73	0.76	0.85	0.69	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	13	0	23.5	25.8	26.5	28	29.5	30.3	32.4	28.1	2.33
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	0	0.18	0.19	0.24	0.28	0.49	0.55	0.56	0.34	0.14
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	72	42	8
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	47	26	<2	<2	<2	<2	3	3	10	2	1
Barium ( $\mu\text{g/L}$ as Ba)	18	0	131	138	144	150	165	172	225	156	21
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	10	<50	<50	<50	<50	<50	62	62	52	4
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	2	--	2	2	3	--	3	2	1
Copper ( $\mu\text{g/L}$ as Cu)	18	10	<5	<5	<5	<5	24	68	145	23	36
Iron ( $\mu\text{g/L}$ as Fe)	23	18	<10	<10	<10	<10	<10	16	33	12	5
Lead ( $\mu\text{g/L}$ as Pb)	48	38	<2	<2	<2	<2	<2	6	33	3	5
Lithium (mg/L as Li)	5	0	0.02	--	0.02	0.02	0.02	--	0.19	0.05	0.08
Manganese ( $\mu\text{g/L}$ as Mn)	23	21	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	318	320	335	359	390	450	456	367	43
Vanadium ( $\mu\text{g/L}$ as V)	14	12	<10	<10	<10	<10	<10	10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	18	7	<5	<5	<5	6	13	16	19	9	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	15	<1	<1	<1	<1	<1	1.27	1.33	1.04	0.1

**Table 58.--Construction Information and summary statistics for water-quality data for Ridgcrest 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'12"	Well capacity (gal/min): 2,780	Ground elevation (ft asl): 5,385
Longitude: 106°33'10"	Cased depth (ft bls): 1,448	Static water level (ft bls): 538.25
Date drilled: 1974	Screened interval (ft bls): 620-1,436	Static water level date: 2/10/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	27	0	210	250	321	339	344	346	357	322	38.4
pH, field (standard units)	27	0	7.16	7.41	7.61	7.8	7.93	8.07	8.1	7.77	0.23
pH, lab (standard units)	17	0	7.3	7.35	7.75	7.94	8.01	8.14	8.2	7.87	0.24
Eh, field (mV)	16	0	78	86	129	171	264	398	543	205	123
Temperature, field (deg C)	27	0	15.7	22	22.4	22.6	22.7	23	24	22.4	1.4
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	86.3	98.5	107	108	110	116	120	107	7.46
Alkalinity (mg/L as $\text{CaCO}_3$ )	29	0	103	103	106	108	111	120	131	110	6.17
Langelier saturation index (standard units)	25	0	-0.6	-0.4	-0.22	-0.1	0.2	0.28	0.4	-0.04	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	29	0	165	175	198	210	224	232	260	210	22.2
Calcium (mg/L as Ca)	20	0	32.2	34.1	35.2	39.2	40.2	42	52.8	38.8	4.37
Calcium (mg/L as $\text{CaCO}_3$ )	23	0	83	88.3	91.3	94.4	100	116	121	97.5	9.74
Magnesium (mg/L as Mg)	18	0	3.84	4.04	4.37	4.59	4.81	5.08	6.15	4.62	0.49
Sodium (mg/L as Na)	20	0	21.2	22.2	24.2	26.1	27.8	29.4	34.3	26.2	3.07
Potassium (mg/L as K)	18	0	2.37	2.39	2.59	2.73	3.07	3.19	3.62	2.81	0.32
Bicarbonate (mg/L as $\text{CaCO}_3$ )	28	0	101	102	105	107	110	119	130	108	6.23
Carbonate (mg/L as $\text{CaCO}_3$ )	29	15	<1	<1	<1	<1	1.31	1.62	1.96	1.18	0.27
Sulfate (mg/L as $\text{SO}_4$ )	29	0	17.9	18.6	21.7	22.1	22.6	23.2	27.6	21.9	1.81
Chloride (mg/L as Cl)	29	0	20.2	22.3	23.1	24.7	25	29.1	41	25.1	3.96
Fluoride (mg/L as F)	27	0	0.43	0.48	0.55	0.57	0.6	0.64	0.69	0.56	0.06
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	24.4	26.9	27.4	30.3	31.3	31.8	34.2	29.6	2.74
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	1	<0.05	0.12	0.28	0.36	0.39	0.55	0.6	0.34	0.15
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	29	6	<2	<2	2	3	3	3	4	3	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	128	131	141	147	156	168	211	150	19
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	6	<50	<50	<50	50	55	60	71	54	6
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	2	--	2	2	2	--	3	2	0
Copper ( $\mu\text{g/L}$ as Cu)	17	10	<5	<5	<5	<5	8	14	16	7	4
Iron ( $\mu\text{g/L}$ as Fe)	20	9	<10	<10	<10	12	18	49	388	35	84
Lead ( $\mu\text{g/L}$ as Pb)	28	25	<2	<2	<2	<2	<2	3	4	2	1
Lithium (mg/L as Li)	5	0	0.01	--	0.01	0.02	0.02	--	0.03	0.02	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	20	9	<2	<2	<2	2	2	4	5	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	316	319	351	374	412	448	474	381	44
Vanadium ( $\mu\text{g/L}$ as V)	13	11	<10	<10	<10	<10	<10	10	15	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	17	5	<5	<5	<5	8	21	71	135	22	33
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	15	<1	<1	<1	<1	<1	<1	1.19	1.01	0.05

**Table 59.--Construction information and summary statistics for water-quality data for Ridgecrest 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'45"	Well capacity (gal/min): 2,820	Ground elevation (ft asl): 5,344
Longitude: 106°33'40"	Cased depth (ft bls): 1,424	Static water level (ft bls): 495.55
Date drilled: 1974	Screened interval (ft bls): 572-1,412	Static water level date: 2/10/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	33	0	195	260	340	380	399	406	459	363	57.5
pH, field (standard units)	33	0	7.25	7.42	7.61	7.72	7.87	8	8.1	7.72	0.22
pH, lab (standard units)	18	0	7.04	7.33	7.63	7.94	8.01	8.03	8.08	7.78	0.3
Eh, field (mV)	16	0	62	78	136	179	293	557	733	233	180
Temperature, field (deg C)	33	0	15.3	21	21.5	21.7	22	23.1	27.8	21.9	1.9
Hardness (mg/L as $\text{CaCO}_3$ )	17	0	114	115	130	134	137	142	157	133	10.2
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	98	107	109	110	114	121	131	112	6.16
Langelier saturation index (standard units)	30	0	-0.43	-0.27	-0.13	0.04	0.2	0.3	0.5	0.02	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	34	0	192	221	230	243	256	266	300	243	20.4
Calcium (mg/L as Ca)	21	0	38.6	40.2	42.6	45.7	48.2	50.2	52.6	45.6	3.82
Calcium (mg/L as $\text{CaCO}_3$ )	29	0	99	106	111	118	129	144	150	120	12.9
Magnesium (mg/L as Mg)	19	0	5	5.45	5.65	5.97	6.37	6.44	6.52	5.92	0.4
Sodium (mg/L as Na)	21	0	21.1	23.6	25.1	26.4	28	30.3	30.8	26.6	2.54
Potassium (mg/L as K)	19	0	2.9	2.98	3.05	3.28	3.52	3.75	3.88	3.31	0.27
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	97.2	107	108	110	116	121	142	112	8.08
Carbonate (mg/L as $\text{CaCO}_3$ )	34	20	<1	<1	<1	<1	1.3	1.62	2.01	1.15	0.26
Sulfate (mg/L as $\text{SO}_4$ )	34	0	20.7	22.9	24.4	26.3	27	27.4	27.8	25.7	1.87
Chloride (mg/L as Cl)	34	0	23.8	32.5	36.3	38.3	39.6	41.6	60.1	38.2	5.52
Fluoride (mg/L as F)	32	0	0.36	0.37	0.4	0.44	0.47	0.51	0.62	0.44	0.06
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	28.8	30.3	31.4	34	37.7	40.6	42.2	34.6	4.24
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	1	<0.05	0.06	0.1	0.15	0.37	0.43	0.44	0.21	0.15
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	34	6	<2	<2	2	3	3	4	4	3	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	17	0	156	159	166	181	196	210	255	184	25
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	2	<50	<50	62	81	113	127	133	86	30
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	0	1	--	1	1	2	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	8	<5	<5	<5	6	10	16	29	9	6
Iron ( $\mu\text{g}/\text{L}$ as Fe)	21	12	<10	<10	<10	<10	12	21	95	16	19
Lead ( $\mu\text{g}/\text{L}$ as Pb)	33	30	<2	<2	<2	<2	<2	<2	12	2	2
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	21	5	<2	<2	2	3	3	3	3	3	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	14	<5	<5	<5	<5	<5	<5	6	5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	341	346	358	391	437	497	535	409	59
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	10	<10	<10	<10	<10	<10	12	16	11	2
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	5	<5	<5	<5	9	12	26	103	15	23
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.43	2.32	1.13	0.34

**Table 60.--Construction information and summary statistics for water-quality data for Ridgecrest 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'20"	Well capacity (gal/min): 2,890	Ground elevation (ft asl): 5,355
Longitude: 106°33'45"	Cased depth (ft bls): 1,470	Static water level (ft bls): 418.98
Date drilled: 1990	Screened interval (ft bls): 636-1,260	Static water level date: 2/10/98

**Summary statistics (data from 1992 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	14	0	282	356	372	378	383	391	402	372	28
pH, field (standard units)	14	0	7.51	7.54	7.58	7.72	7.76	7.87	8.02	7.69	0.14
pH, lab (standard units)	14	0	7.4	7.7	7.79	7.93	8	8.02	8.05	7.88	0.17
Eh, field (mV)	12	0	111	111	126	148	189	260	564	190	125
Temperature, field (deg C)	15	0	15.6	22	22.1	22.3	22.4	22.9	24.9	22	1.9
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	118	124	124	129	131	133	152	129	7.74
Alkalinity (mg/L as $\text{CaCO}_3$ )	15	0	104	106	107	109	110	112	131	110	6.18
Langelier saturation index (standard units)	14	0	-0.25	-0.24	-0.15	-0.06	0.02	0.16	0.23	-0.05	0.15
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	15	0	224	228	232	236	244	248	264	239	9.62
Calcium (mg/L as Ca)	15	0	35.4	38.2	40	41.4	45.2	46.3	46.7	42	3.3
Calcium (mg/L as $\text{CaCO}_3$ )	14	0	100	100	102	105	110	113	135	108	9.04
Magnesium (mg/L as Mg)	15	0	4.27	4.8	5.41	5.66	5.93	6.27	6.28	5.58	0.54
Sodium (mg/L as Na)	15	0	21	21	23.3	24.4	25.9	28.1	28.2	24.5	2.22
Potassium (mg/L as K)	15	0	2.32	2.47	2.73	2.91	3.13	3.29	3.7	2.93	0.35
Bicarbonate (mg/L as $\text{CaCO}_3$ )	15	0	103	106	106	108	110	112	130	109	6.16
Carbonate (mg/L as $\text{CaCO}_3$ )	15	11	<1	<1	<1	<1	1	1.07	1.12	1.02	0.04
Sulfate (mg/L as $\text{SO}_4$ )	15	0	21.5	22.4	25.5	26.6	27.8	28.6	30.4	26.4	2.25
Chloride (mg/L as Cl)	15	0	28.5	29.4	31.3	32.6	34	36	48.2	33.3	4.53
Fluoride (mg/L as F)	15	0	0.35	0.4	0.42	0.45	0.52	0.75	0.76	0.49	0.12
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	30.5	31.5	33.7	37.1	38.8	41.2	44.5	36.7	4.01
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	10	1	<0.05	0.06	0.1	0.13	0.22	0.41	0.41	0.18	0.13
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	11	10	<40	<40	<40	<40	<40	<40	71	43	9
Antimony ( $\mu\text{g/L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	15	0	2	3	4	5	6	6	11	5	2
Barium ( $\mu\text{g/L}$ as Ba)	11	0	141	143	147	160	172	181	192	160	17
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	10	1	<50	61	76	88	94	120	140	88	23
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	1	--	1	2	2	--	2	2	0
Copper ( $\mu\text{g/L}$ as Cu)	11	8	<5	<5	<5	<5	6	6	6	5	0
Iron ( $\mu\text{g/L}$ as Fe)	15	1	<10	12	16	18	25	61	62	25	18
Lead ( $\mu\text{g/L}$ as Pb)	15	14	<2	<2	<2	<2	<2	<2	2	2	0
Lithium (mg/L as Li)	1	0	0.03	--	--	0.03	--	--	0.03	0.03	--
Manganese ( $\mu\text{g/L}$ as Mn)	15	0	2	3	3	4	5	8	24	5	5
Nickel ( $\mu\text{g/L}$ as Ni)	9	9	<5	--	<5	<5	<5	--	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	1	0	2	--	--	2	--	--	2	2	--
Strontium ( $\mu\text{g/L}$ as Sr)	11	0	331	337	341	348	432	467	551	382	71
Vanadium ( $\mu\text{g/L}$ as V)	9	9	<10	--	<10	<10	<10	--	<10	<10	0
Zinc ( $\mu\text{g/L}$ as Zn)	11	7	<5	<5	<5	<5	8	10	14	7	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	10	8	<1	<1	<1	<1	<1	1.31	1.52	1.06	0.16

**Table 61.--Construction information and summary statistics for water-quality data for San Jose 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'16"	Well capacity (gal/min): 560	Ground elevation (ft asl): 4,950
Longitude: 106°38'48"	Cased depth (ft bls): 600	Static water level (ft bls): 41.13
Date drilled: 1949	Screened interval (ft bls): --	Static water level date: 12/15/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	62	0	304	479	551	570	616	625	650	559	73.6
pH, field (standard units)	64	0	6.83	7.1	7.21	7.34	7.46	7.7	7.8	7.34	0.23
pH, lab (standard units)	49	0	7.3	7.35	7.58	7.66	7.75	7.82	8.09	7.65	0.17
Eh, field (mV)	42	0	-44	107	127	153	179	335	616	184	131
Temperature, field (deg C)	64	0	17.6	18.4	18.6	19	19.2	19.6	22	19	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	39	0	139	190	196	200	210	220	241	202	16
Alkalinity (mg/L as $\text{CaCO}_3$ )	64	0	104	160	162	168	172	180	194	167	14.7
Langelier saturation index (standard units)	61	0	-0.64	-0.4	-0.29	-0.18	0	0.2	0.5	-0.12	0.25
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	63	0	356	396	404	428	452	460	488	428	28.4
Calcium (mg/L as Ca)	44	0	49.6	52.2	54.5	56.5	63.6	67.9	77	58.7	6.38
Calcium (mg/L as $\text{CaCO}_3$ )	61	0	95.8	138	144	155	172	192	245	160	24.9
Magnesium (mg/L as Mg)	41	0	11.8	12.7	13	13.4	14.4	15.4	17.5	13.8	1.16
Sodium (mg/L as Na)	44	0	27.7	32.4	35.1	36.2	38.3	40	44.8	36.4	3.37
Potassium (mg/L as K)	41	0	7.73	8.15	8.87	9.24	9.73	9.92	12.5	9.25	0.83
Bicarbonate (mg/L as $\text{CaCO}_3$ )	65	0	103	159	161	168	171	183	193	166	15
Carbonate (mg/L as $\text{CaCO}_3$ )	65	48	<1	<1	<1	<1	1.01	1.22	1.8	1.05	0.14
Sulfate (mg/L as $\text{SO}_4$ )	62	0	88.2	98.5	101	109	117	124	127	109	9.83
Chloride (mg/L as Cl)	65	0	9.8	13.4	14.2	16.3	19.9	22.1	44.5	17.3	4.9
Fluoride (mg/L as F)	64	0	0.11	0.29	0.31	0.33	0.37	0.41	0.69	0.34	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	34	0	54.8	61.8	66.1	69.4	72.4	76.7	77.9	68.9	5.57
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	31	22	<0.05	<0.05	<0.05	<0.05	0.08	0.09	0.1	0.06	0.02
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	50	41	2
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	66	0	4	6	6	6	7	8	14	7	1
Barium ( $\mu\text{g/L}$ as Ba)	18	0	35	36	39	43	45	55	66	44	7
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	60	79	97	133	144	154	200	125	38
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	18	14	<5	<5	<5	<5	<5	8	8	5	1
Iron ( $\mu\text{g/L}$ as Fe)	44	23	<10	<10	<10	<10	14	19	125	16	19
Lead ( $\mu\text{g/L}$ as Pb)	64	62	<2	<2	<2	<2	<2	<2	11	2	1
Lithium (mg/L as Li)	4	0	0.07	--	0.07	0.08	0.1	--	0.12	0.09	0.02
Manganese ( $\mu\text{g/L}$ as Mn)	44	26	<2	<2	<2	<2	3	3	4	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	6	<2	--	<2	<2	<2	--	2	2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	552	559	622	675	757	827	1010	696	110
Vanadium ( $\mu\text{g/L}$ as V)	13	11	<10	<10	<10	<10	<10	10	14	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	18	13	<5	<5	<5	<5	5	8	9	6	1
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	5	<1	<1	<1	1.4	1.72	2.35	2.66	1.47	0.49

**Table 62.--Construction information and summary statistics for water-quality data for San Jose 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'36"	Well capacity (gal/min): 1,500	Ground elevation (ft asl): 4,997
Longitude: 106°38'32"	Cased depth (ft bls): 996	Static water level (ft bls): 95.88
Date drilled: 1959	Screened interval (ft bls): 264-996	Static water level date: 12/15/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	78	0	272	350	396	420	428	432	451	403	40.9
pH, field (standard units)	79	0	7.33	7.59	7.81	7.9	8.02	8.2	8.8	7.89	0.22
pH, lab (standard units)	62	0	7.69	7.95	8.01	8.06	8.1	8.15	8.23	8.04	0.1
Eh, field (mV)	58	0	46	108	141	169	207	428	710	205	128
Temperature, field (deg C)	79	0	23.4	24.7	25.7	25.8	25.9	26	28.8	25.7	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	51	0	66	90.2	92	94	98	100	113	94.6	7.09
Alkalinity (mg/L as $\text{CaCO}_3$ )	77	0	104	106	108	110	112	116	163	111	7.51
Langelier saturation index (standard units)	75	0	-0.53	-0.3	-0.08	0.01	0.13	0.3	0.4	0	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	77	0	265	285	296	304	312	316	385	304	16.8
Calcium (mg/L as Ca)	57	0	18.7	24.6	25.6	27.2	28.6	30.4	34.3	27.2	2.87
Calcium (mg/L as $\text{CaCO}_3$ )	73	0	62	66	68	69.8	72	75	102	70.7	6.03
Magnesium (mg/L as Mg)	55	0	3.71	5.65	5.93	6.34	6.78	7.35	8.13	6.34	0.76
Sodium (mg/L as Na)	57	0	29.2	38.9	43.1	46.3	48.9	51.1	57	45.7	5.36
Potassium (mg/L as K)	55	0	4.63	6.5	6.96	7.52	7.89	8.58	9.7	7.45	0.89
Bicarbonate (mg/L as $\text{CaCO}_3$ )	78	0	103	105	107	108	111	116	162	110	7.65
Carbonate (mg/L as $\text{CaCO}_3$ )	78	18	<1	<1	1.01	1.18	1.3	1.56	2.55	1.23	0.27
Sulfate (mg/L as $\text{SO}_4$ )	75	0	41.5	49.9	52.6	53.8	55.8	58.5	61	54.1	3.27
Chloride (mg/L as Cl)	78	0	18.1	23.6	24.3	24.8	26	27.1	29.7	25.1	1.58
Fluoride (mg/L as F)	76	0	0.57	0.62	0.66	0.7	0.74	0.77	0.91	0.7	0.06
Bromide (mg/L as Br)	9	7	<0.5	--	<0.5	<0.5	<0.5	--	0.6	0.5	0
Silica (mg/L as $\text{SiO}_2$ )	48	0	56.3	63.5	67.8	71.1	74.5	76.6	91.2	70.8	5.89
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	45	0	0.49	0.57	0.62	0.65	0.68	0.75	0.9	0.66	0.08
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	126	45	20
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	79	0	8	18	19	20	22	23	27	20	3
Barium ( $\mu\text{g/L}$ as Ba)	18	0	58	66	75	82	86	105	118	83	14
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	0	111	113	163	180	189	216	707	211	153
Cadmium ( $\mu\text{g/L}$ as Cd)	9	6	<0.1	--	<0.1	<0.1	0.1	--	0.3	0.1	0.1
Chromium ( $\mu\text{g/L}$ as Cr)	9	0	4	--	4	5	5	--	6	5	1
Copper ( $\mu\text{g/L}$ as Cu)	18	13	<5	<5	<5	<5	6	9	19	6	3
Iron ( $\mu\text{g/L}$ as Fe)	58	51	<10	<10	<10	<10	<10	16	148	14	19
Lead ( $\mu\text{g/L}$ as Pb)	77	68	<2	<2	<2	<2	<2	2	15	2	2
Lithium (mg/L as Li)	4	0	0.01	--	0.05	0.09	0.11	--	0.12	0.08	0.05
Manganese ( $\mu\text{g/L}$ as Mn)	58	55	<2	<2	<2	<2	<2	<2	8	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	4	2	1
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	220	240	301	316	359	407	444	327	59
Vanadium ( $\mu\text{g/L}$ as V)	14	3	<10	<10	12	19	22	24	25	17	5
Zinc ( $\mu\text{g/L}$ as Zn)	18	11	<5	<5	<5	<5	7	12	13	7	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	15	<1	<1	<1	<1	<1	1.38	1.76	1.07	0.2

**Table 63.--Construction information and summary statistics for water-quality data for San Jose 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°03'43"	Well capacity (gal/min): 2,010	Ground elevation (ft asl): 4,952
Longitude: 106°39'01"	Cased depth (ft bls): 1,032	Static water level (ft bls): 41.30
Date drilled: 1963	Screened interval (ft bls): 192-1,032	Static water level date: 12/15/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	92	0	260	367	431	433	440	441	446	421	37.8
pH, field (standard units)	94	0	7.58	7.83	7.95	8.09	8.24	8.33	8.5	8.09	0.2
pH, lab (standard units)	77	0	7.62	7.98	8.14	8.2	8.25	8.28	8.34	8.16	0.14
Eh, field (mV)	74	0	46	110	134	170	203	236	678	190	112
Temperature, field (deg C)	94	0	17.6	23.4	24	24.3	24.4	24.6	32.5	24.2	1.3
Hardness (mg/L as CaCO <sub>3</sub> )	60	0	42	58.7	60	62.3	64	66	78.6	62.4	4.54
Alkalinity (mg/L as CaCO <sub>3</sub> )	92	0	95.2	113	114	116	118	123	133	117	4.58
Langelier saturation index (standard units)	90	0	-0.46	-0.24	-0.13	0.02	0.19	0.3	0.6	0.03	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	92	0	255	292	300	310	318	320	364	309	16.5
Calcium (mg/L as Ca)	65	0	13	16	16.7	17.6	18.8	20.3	22.6	17.8	1.88
Calcium (mg/L as CaCO <sub>3</sub> )	90	0	23.8	43.2	44.4	46.3	49	53.7	63.8	47.2	5.06
Magnesium (mg/L as Mg)	63	0	2.89	3.72	3.85	4.07	4.39	4.64	5.22	4.12	0.45
Sodium (mg/L as Na)	65	0	42	57	61.9	65.4	68	73.6	83.4	64.8	7.32
Potassium (mg/L as K)	63	0	4.08	5.48	5.69	6.09	6.34	6.81	8.33	6.09	0.68
Bicarbonate (mg/L as CaCO <sub>3</sub> )	93	0	93.4	112	112	114	116	122	133	115	5.02
Carbonate (mg/L as CaCO <sub>3</sub> )	93	12	<1	<1	1.48	1.71	1.91	2.08	2.7	1.66	0.4
Sulfate (mg/L as SO <sub>4</sub> )	93	0	54.9	57.6	67.9	69.3	70.7	72.8	78.2	68.4	5.09
Chloride (mg/L as Cl)	93	0	8.12	13.6	14.3	14.7	15.3	16	29.5	15	2.35
Fluoride (mg/L as F)	92	0	0.74	0.88	0.91	0.95	0.99	1.02	1.26	0.95	0.07
Bromide (mg/L as Br)	6	6	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	56	0	47.6	59.3	63.5	66.7	70.4	74.7	86.8	66.7	6.38
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	46	0	0.2	0.26	0.28	0.33	0.42	0.6	0.67	0.37	0.12
Orthophosphate (mg/L as P)	6	6	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	17	16	<40	<40	<40	<40	<40	<40	89	43	12
Antimony (µg/L as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic (µg/L as As)	95	0	22	28	30	33	35	37	41	33	4
Barium (µg/L as Ba)	17	0	53	54	60	62	66	89	89	64	10
Beryllium (µg/L as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	12	0	169	191	209	230	261	263	268	228	31
Cadmium (µg/L as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium (µg/L as Cr)	8	0	2	--	2	3	3	--	3	3	0
Copper (µg/L as Cu)	17	16	<5	<5	<5	<5	<5	<5	5	5	0
Iron (µg/L as Fe)	66	59	<10	<10	<10	<10	<10	10	25	10	2
Lead (µg/L as Pb)	93	85	<2	<2	<2	<2	<2	<2	8	2	1
Lithium (mg/L as Li)	4	0	0.1	--	0.1	0.11	0.12	--	0.13	0.11	0.01
Manganese (µg/L as Mn)	66	66	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel (µg/L as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (µg/L as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver (µg/L as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	17	0	210	216	236	259	279	284	387	261	41
Vanadium (µg/L as V)	13	0	17	25	27	29	31	31	33	28	4
Zinc (µg/L as Zn)	17	15	<5	<5	<5	<5	<5	6	8	5	1
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	11	<1	<1	<1	<1	1.14	1.35	1.41	1.08	0.14

**Table 64.--Construction information and summary statistics for water-quality data for Santa Barbara 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°06'48"	Well capacity (gal/min): 3,420	Ground elevation (ft asl): 5,139
Longitude: 106°36'26"	Cased depth (ft bls): 984	Static water level (ft bls): 260.83
Date drilled: 1963	Screened interval (ft bls): 312-984	Static water level date: 2/13/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	41	0	200	270	290	308	320	328	341	300	32
pH, field (standard units)	42	0	7.28	7.46	7.66	7.84	7.93	8.1	8.7	7.8	0.27
pH, lab (standard units)	29	0	7.14	7.6	7.91	7.98	8	8.08	8.31	7.9	0.24
Eh, field (mV)	26	0	44	129	163	196	225	510	634	231	138
Temperature, field (deg C)	42	0	17.6	19	19.6	19.6	19.8	20.5	21	19.7	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	26	0	95	96	98	100	104	106	112	101	4.22
Alkalinity (mg/L as $\text{CaCO}_3$ )	43	0	105	106	107	109	114	119	124	111	5.37
Langelier saturation index (standard units)	40	0	-0.57	-0.45	-0.22	-0.05	0.1	0.2	0.9	-0.07	0.28
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	44	0	168	200	211	223	232	240	280	222	19.6
Calcium (mg/L as Ca)	30	0	25.5	29.5	30.6	32	33.4	35.5	37.1	32.1	2.58
Calcium (mg/L as $\text{CaCO}_3$ )	39	0	62.3	76.3	80	84	88	95.6	108	84.6	7.82
Magnesium (mg/L as Mg)	28	0	3.72	4.4	4.52	4.84	5.04	5.4	5.73	4.82	0.41
Sodium (mg/L as Na)	30	0	21.6	23.7	24.8	26.3	27.8	29.8	35.5	26.6	2.7
Potassium (mg/L as K)	28	0	2.93	3.34	3.47	3.68	3.87	4.3	5.33	3.73	0.45
Bicarbonate (mg/L as $\text{CaCO}_3$ )	44	0	104	105	106	108	113	120	123	110	5.65
Carbonate (mg/L as $\text{CaCO}_3$ )	44	20	<1	<1	<1	1	1.2	1.57	2.04	1.16	0.3
Sulfate (mg/L as $\text{SO}_4$ )	43	0	26.7	29.8	32.2	33.4	35.3	38	43.3	33.7	3.17
Chloride (mg/L as Cl)	44	0	7.3	7.86	8.29	8.66	9.94	10.2	15.2	9.11	1.4
Fluoride (mg/L as F)	43	0	0.19	0.53	0.55	0.6	0.65	0.75	0.97	0.61	0.12
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	20	0	37.3	39.5	45.2	47.4	48.6	61.8	64.1	48	7.14
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	18	4	<0.05	<0.05	0.1	0.16	0.21	0.46	0.5	0.18	0.13
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	48	40	2
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	44	0	2	10	11	11	12	13	18	11	2
Barium ( $\mu\text{g/L}$ as Ba)	18	0	78	79	84	86	97	114	151	93	17
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	3	<50	<50	57	69	81	95	107	72	18
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	18	16	<5	<5	<5	<5	<5	9	13	6	2
Iron ( $\mu\text{g/L}$ as Fe)	30	24	<10	<10	<10	<10	<10	16	53	13	9
Lead ( $\mu\text{g/L}$ as Pb)	43	39	<2	<2	<2	<2	<2	<2	6	2	1
Lithium (mg/L as Li)	5	0	0.04	--	0.04	0.05	0.05	--	0.06	0.05	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	30	27	<2	<2	<2	<2	<2	2	5	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	16	15	<5	<5	<5	<5	<5	<5	12	5	2
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	239	256	263	272	301	356	361	285	35
Vanadium ( $\mu\text{g/L}$ as V)	14	12	<10	<10	<10	<10	<10	11	11	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	18	12	<5	<5	<5	<5	5	13	15	6	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	14	<1	<1	<1	<1	<1	1.87	2.97	1.18	0.51

**Table 65.--Construction information and summary statistics for water-quality data for Thomas 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'53"	Well capacity (gal/min): 1,890	Ground elevation (ft asl): 5,445
Longitude: 106°32'56"	Cased depth (ft bls): 1,092	Static water level (ft bls): 595
Date drilled: 1959	Screened interval (ft bls): 624-1,092	Static water level date: 4/9/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	32	0	310	340	415	472	480	500	520	445	58.1
pH, field (standard units)	32	0	7	7.18	7.34	7.6	7.78	7.87	8	7.56	0.27
pH, lab (standard units)	18	0	7.4	7.47	7.62	7.82	7.86	7.99	8.06	7.76	0.17
Eh, field (mV)	14	0	63	88	107	122	148	178	435	144	89
Temperature, field (deg C)	32	0	17	21.9	22	22.15	22.5	22.7	23.1	21.9	1.3
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	144	146	147	150	150	155	168	150	5.54
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	118	128	131	133	138	148	151	135	7.98
Langelier saturation index (standard units)	29	0	-0.53	-0.33	-0.2	0	0.2	0.3	0.5	-0.01	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	33	0	240	260	280	285	292	304	332	285	18.2
Calcium (mg/L as Ca)	19	0	48.2	48.8	51.5	55.4	56.5	61.7	66.7	55.1	4.54
Calcium (mg/L as $\text{CaCO}_3$ )	28	0	94	132	134	136	141	151	162	137	11.6
Magnesium (mg/L as Mg)	18	0	3.36	3.39	3.53	3.7	3.82	4.05	4.6	3.72	0.29
Sodium (mg/L as Na)	19	0	33.6	33.8	36.7	37.9	41.3	44.7	45.5	38.6	3.33
Potassium (mg/L as K)	18	0	1.7	1.72	1.88	2.13	2.2	2.26	2.35	2.06	0.19
Bicarbonate (mg/L as $\text{CaCO}_3$ )	33	0	122	129	130	133	137	148	150	135	7.29
Carbonate (mg/L as $\text{CaCO}_3$ )	33	23	<1	<1	<1	<1	1.29	1.7	2.78	1.21	0.43
Sulfate (mg/L as $\text{SO}_4$ )	33	0	24.7	27.4	29.2	30.3	31.6	32.8	35.4	30.1	2.34
Chloride (mg/L as Cl)	33	0	18.9	41.8	44.7	46.2	49.4	53.7	89.9	47.3	9.76
Fluoride (mg/L as F)	32	0	0.17	0.39	0.43	0.46	0.5	0.54	0.61	0.46	0.08
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	26.7	28.6	28.9	30.7	33	33.1	33.5	30.7	2.22
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.22	--	0.46	0.55	0.62	--	0.72	0.51	0.16
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	94	43	13
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	33	29	<2	<2	<2	<2	<2	2	9	2	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	142	143	153	165	177	184	256	169	27
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	2	<50	<50	62	74	87	106	110	76	20
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	1	<1	--	1	1	1	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	16	<5	<5	<5	<5	<5	<5	6	5	0
Iron ( $\mu\text{g}/\text{L}$ as Fe)	20	8	<10	<10	<10	10	13	17	319	27	69
Lead ( $\mu\text{g}/\text{L}$ as Pb)	32	28	<2	<2	<2	<2	<2	2	4	2	0
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	20	14	<2	<2	<2	<2	2	3	3	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	264	274	292	320	332	354	394	316	33
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	11	<5	<5	<5	<5	6	45	91	13	22
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	13	<1	<1	<1	<1	<1	1.23	1.59	1.06	0.16

**Table 66.--Construction information and summary statistics for water-quality data for Thomas 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°07'49"	Well capacity (gal/min): 1,670	Ground elevation (ft asl): 5,490
Longitude: 106°32'35"	Cased depth (ft bls): 1,224	Static water level (ft bls): 629
Date drilled: 1958	Screened interval (ft bls): 696-1,224	Static water level date: 4/9/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	25	0	320	376	398	443	481	492	585	441	56.8
pH, field (standard units)	26	0	7.02	7.1	7.41	7.62	7.8	7.9	8	7.56	0.28
pH, lab (standard units)	17	0	7.44	7.45	7.61	7.75	7.83	7.89	7.9	7.71	0.16
Eh, field (mV)	14	0	63	81	92	124	158	191	485	146	104
Temperature, field (deg C)	26	0	18	22.8	24.4	24.5	24.7	25.6	26	24.3	1.5
Hardness (mg/L as CaCO <sub>3</sub> )	16	0	124	136	138	141	144	168	176	144	12.3
Alkalinity (mg/L as CaCO <sub>3</sub> )	28	0	115	122	126	131	133	138	142	130	6.16
Langelier saturation index (standard units)	25	0	-0.5	-0.44	-0.15	0.06	0.28	0.4	0.7	0.04	0.29
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	28	0	260	274	280	287	299	305	360	290	18.4
Calcium (mg/L as Ca)	19	0	37.8	46.8	49.6	52	58.1	62.3	65.2	53	6.28
Calcium (mg/L as CaCO <sub>3</sub> )	23	0	100	124	126	132	136	138	150	131	9.96
Magnesium (mg/L as Mg)	17	0	2.4	2.99	3.15	3.31	3.57	3.6	3.79	3.3	0.33
Sodium (mg/L as Na)	19	0	28.2	35.6	37.8	40.7	42.6	46.8	53.1	40.7	5.01
Potassium (mg/L as K)	17	0	1.36	1.47	1.97	2.11	2.29	2.43	2.43	2.07	0.3
Bicarbonate (mg/L as CaCO <sub>3</sub> )	27	0	118	121	125	130	132	136	141	129	5.63
Carbonate (mg/L as CaCO <sub>3</sub> )	28	21	<1	<1	<1	<1	1.11	2.35	3.19	1.23	0.58
Sulfate (mg/L as SO <sub>4</sub> )	28	0	13.4	21.7	25.4	26.7	27.1	27.7	28.1	25.5	3.04
Chloride (mg/L as Cl)	28	1	<4	47.7	51	53.6	58	65.2	83.2	53.9	12.2
Fluoride (mg/L as F)	27	0	0.25	0.39	0.42	0.48	0.51	0.57	0.83	0.48	0.1
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	11	0	27.2	28.8	28.9	30.9	32.5	33.2	33.5	30.8	2.03
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.17	0.07	0.04
Nitrate (mg/L as N)	9	0	0.16	--	0.2	0.21	0.22	--	0.3	0.22	0.04
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	16	16	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony (µg/L as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic (µg/L as As)	28	26	<2	<2	<2	<2	<2	<2	2	2	0
Barium (µg/L as Ba)	16	0	95	116	144	158	165	172	263	157	34
Beryllium (µg/L as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	12	1	<50	68	81	103	110	114	157	98	27
Cadmium (µg/L as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium (µg/L as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper (µg/L as Cu)	16	14	<5	<5	<5	<5	<5	7	9	5	1
Iron (µg/L as Fe)	19	1	<10	10	17	20	24	70	117	28	25
Lead (µg/L as Pb)	27	22	<2	<2	<2	<2	<2	7	18	3	3
Lithium (mg/L as Li)	3	0	0.02	--	--	0.02	--	--	0.02	0.02	0
Manganese (µg/L as Mn)	19	6	<2	<2	<2	2	2	4	5	2	1
Nickel (µg/L as Ni)	14	12	<5	<5	<5	<5	<5	8	17	6	3
Selenium (µg/L as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver (µg/L as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	16	0	186	210	257	282	308	317	324	277	38
Vanadium (µg/L as V)	12	10	<10	<10	<10	<10	<10	10	21	11	3
Zinc (µg/L as Zn)	16	9	<5	<5	<5	<5	6	32	35	9	10
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	13	<1	<1	<1	<1	<1	1.58	1.95	1.1	0.28

**Table 67.--Construction information and summary statistics for water-quality data for Thomas 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'16"	Well capacity (gal/min): 1,720	Ground elevation (ft asl): 5,415
Longitude: 106°33'13"	Cased depth (ft bls): 1,200	Static water level (ft bls): 551
Date drilled: 1958	Screened interval (ft bls): 672-1,200	Static water level date: 7/18/94

**Summary statistics (data from 1988 to 1993, 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	22	0	320	370	420	473	482	529	610	457	64.5
pH, field (standard units)	23	0	7.04	7.33	7.45	7.58	7.8	7.9	7.9	7.59	0.24
pH, lab (standard units)	10	0	7.18	7.28	7.6	7.83	7.88	7.91	7.92	7.71	0.25
Eh, field (mV)	8	0	68	--	124	138	188	--	439	176	114
Temperature, field (deg C)	23	0	16	21	21.3	21.4	22	22	25	21.4	1.5
Hardness (mg/L as $\text{CaCO}_3$ )	8	0	137	--	143	146	153	--	170	149	10.4
Alkalinity (mg/L as $\text{CaCO}_3$ )	24	0	128	135	137	140	145	151	154	141	6.42
Langelier saturation index (standard units)	20	0	-0.95	-0.43	-0.17	0.01	0.25	0.35	0.7	0	0.36
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	24	0	260	265	278	291	301	312	347	291	19.9
Calcium (mg/L as Ca)	10	0	50.5	51.1	51.9	54.3	59	60.6	61	55.1	3.75
Calcium (mg/L as $\text{CaCO}_3$ )	18	0	48.5	70.7	125	127	135	150	160	124	26
Magnesium (mg/L as Mg)	8	0	4.18	--	4.35	4.62	4.85	--	5.1	4.61	0.33
Sodium (mg/L as Na)	10	0	35	38.1	42.3	43.7	45.5	46.9	48.1	43.3	3.53
Potassium (mg/L as K)	8	0	1.59	--	1.8	2.03	2.18	--	2.44	2.01	0.27
Bicarbonate (mg/L as $\text{CaCO}_3$ )	24	0	127	133	135	139	144	151	152	140	6.31
Carbonate (mg/L as $\text{CaCO}_3$ )	24	12	<1	<1	<1	<1	1.49	2.59	3.03	1.38	0.62
Sulfate (mg/L as $\text{SO}_4$ )	22	0	29.5	29.9	34.3	36	36.9	38.9	39.7	35.4	2.83
Chloride (mg/L as Cl)	24	0	9.16	39.7	41	41.9	43.4	56.3	63.6	42.6	9.35
Fluoride (mg/L as F)	23	0	0.48	0.58	0.59	0.63	0.69	0.71	0.81	0.64	0.08
Bromide (mg/L as Br)	2	2	<0.5	--	--	<0.5	--	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	2	0	34.3	--	--	36.4	--	--	38.4	36.4	2.91
<b>Nutrients</b>											
Nitrite (mg/L as N)	2	2	<0.05	--	--	<0.05	--	--	<0.05	<0.05	0
Nitrate (mg/L as N)	4	2	<0.05	--	<0.05	0.11	0.41	--	0.65	0.23	0.29
Orthophosphate (mg/L as P)	2	2	<0.5	--	--	<0.5	--	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	10	8	<40	<40	<40	<40	<40	175	254	67	68
Antimony ( $\mu\text{g/L}$ as Sb)	3	3	<2	--	--	<2	--	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	24	0	2	5	6	6	8	9	10	7	2
Barium ( $\mu\text{g/L}$ as Ba)	10	0	120	120	122	127	132	186	218	137	30
Beryllium ( $\mu\text{g/L}$ as Be)	2	2	<1	--	--	<1	--	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	5	0	81	--	93	114	132	--	199	124	46
Cadmium ( $\mu\text{g/L}$ as Cd)	2	1	<0.1	--	--	<0.1	--	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	2	1	<1	--	--	2	--	--	3	2	1
Copper ( $\mu\text{g/L}$ as Cu)	9	5	<5	--	<5	<5	24	--	69	20	23
Iron ( $\mu\text{g/L}$ as Fe)	10	3	<10	<10	<10	33	189	371	429	108	151
Lead ( $\mu\text{g/L}$ as Pb)	23	16	<2	<2	<2	<2	2	7	9	3	2
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.03	--	0.03	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	10	1	<2	<2	3	3	6	34	53	9	16
Nickel ( $\mu\text{g/L}$ as Ni)	8	7	<5	--	<5	<5	<5	--	10	6	2
Selenium ( $\mu\text{g/L}$ as Se)	3	2	<2	--	--	<2	--	--	4	3	1
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	10	0	307	310	315	327	351	364	376	333	22
Vanadium ( $\mu\text{g/L}$ as V)	7	6	<10	--	<10	<10	<10	--	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	9	4	<5	--	<5	5	26	--	74	20	25
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	7	<1	--	<1	<1	<1	--	1.29	1.04	0.1

**Table 68.--Construction information and summary statistics for water-quality data for Thomas 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°08'13"	Well capacity (gal/min): 1,850	Ground elevation (ft asl): 5,485
Longitude: 106°32'41"	Cased depth (ft bls): 1,020	Static water level (ft bls): 622
Date drilled: 1958	Screened interval (ft bls): 672-1,020	Static water level date: 12/18/95

**Summary statistics (data from 1988 to 1991, 1994 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	25	0	280	380	420	500	560	581	671	490	91.7
pH, field (standard units)	25	0	6.98	7.2	7.39	7.61	7.8	7.9	8.1	7.58	0.29
pH, lab (standard units)	13	0	7.52	7.54	7.68	7.73	7.84	7.88	7.91	7.74	0.12
Eh, field (mV)	13	0	30	84	126	149	215	251	573	184	131
Temperature, field (deg C)	26	0	14	22.5	23.5	23.95	24.2	24.4	25	23.4	2.1
Hardness (mg/L as CaCO <sub>3</sub> )	11	0	147	154	156	160	181	185	196	167	14.8
Alkalinity (mg/L as CaCO <sub>3</sub> )	26	0	112	132	137	140	143	152	155	139	8.75
Langelier saturation index (standard units)	23	0	-0.45	-0.18	-0.07	0.06	0.3	0.5	2.5	0.19	0.56
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	27	0	200	276	300	315	340	372	404	318	38.9
Calcium (mg/L as Ca)	14	0	51.6	54.7	58.4	60.1	60.8	65.4	71.6	60.2	4.64
Calcium (mg/L as CaCO <sub>3</sub> )	23	0	88.4	108	136	141	150	166	188	141	22.1
Magnesium (mg/L as Mg)	12	0	3.73	3.79	4.06	4.19	4.33	4.45	4.58	4.17	0.25
Sodium (mg/L as Na)	14	0	37.9	44.2	49.5	52	54.8	56.5	57.6	51.1	5.2
Potassium (mg/L as K)	12	0	1.78	1.96	2.03	2.25	2.69	2.79	3.02	2.35	0.39
Bicarbonate (mg/L as CaCO <sub>3</sub> )	26	0	111	130	135	140	143	152	154	139	9.35
Carbonate (mg/L as CaCO <sub>3</sub> )	27	18	<1	<1	<1	<1	1.14	1.58	2.01	1.13	0.26
Sulfate (mg/L as SO <sub>4</sub> )	27	0	19.2	25.6	29	30	32.4	36	38.6	30.3	3.95
Chloride (mg/L as Cl)	27	1	<4	40.7	57.4	64	70.2	77.9	95.5	61.7	18.1
Fluoride (mg/L as F)	26	0	0.42	0.48	0.5	0.52	0.54	0.74	0.78	0.55	0.1
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	8	0	33	--	33.8	34.6	35.5	--	39.1	35	1.9
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	8	2	<0.05	--	0.11	0.19	0.21	--	0.22	0.16	0.07
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	13	12	<40	<40	<40	<40	<40	<40	81	43	11
Antimony (µg/L as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic (µg/L as As)	27	22	<2	<2	<2	<2	<2	2	6	2	1
Barium (µg/L as Ba)	13	0	133	138	148	156	158	172	258	162	31
Beryllium (µg/L as Be)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	8	0	53	--	113	120	147	--	162	122	33
Cadmium (µg/L as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium (µg/L as Cr)	8	6	<1	--	<1	<1	1	--	1	1	0
Copper (µg/L as Cu)	14	8	<5	<5	<5	<5	9	21	107	15	27
Iron (µg/L as Fe)	15	1	<10	11	12	27	45	72	377	52	92
Lead (µg/L as Pb)	26	21	<2	<2	<2	<2	<2	10	23	4	5
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.02	--	0.02	0.02	0
Manganese (µg/L as Mn)	15	5	<2	<2	<2	3	3	3	5	3	1
Nickel (µg/L as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (µg/L as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver (µg/L as Ag)	6	5	<2	--	<2	<2	<2	--	2	2	0
Strontium (µg/L as Sr)	13	0	260	287	313	328	354	373	412	331	39
Vanadium (µg/L as V)	12	11	<10	<10	<10	<10	<10	<10	10	10	0
Zinc (µg/L as Zn)	14	6	<5	<5	<5	8	15	48	162	23	42
<b>Carbon</b>											
Total organic carbon (mg/L as C)	14	11	<1	<1	<1	<1	<1	1.34	1.48	1.08	0.16

**Table 69.--Construction information and summary statistics for water-quality data for Thomas 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'44"	Well capacity (gal/min): 2,210	Ground elevation (ft asl): 5,356
Longitude: 106°33'35"	Cased depth (ft bls): 1,450	Static water level (ft bls): 489.79
Date drilled: 1989	Screened interval (ft bls): 722-1,450	Static water level date: 2/23/98

**Summary statistics (data from 1990 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	16	0	230	292	347	384	393	396	397	363	46.6
pH, field (standard units)	16	0	7.12	7.23	7.42	7.56	7.74	7.84	7.92	7.55	0.23
pH, lab (standard units)	15	0	7.18	7.2	7.8	7.91	7.98	7.99	8.04	7.8	0.28
Eh, field (mV)	14	0	59	73	134	162	177	243	451	173	95
Temperature, field (deg C)	16	0	19.3	20.5	21.1	21.25	21.7	21.8	22	21.2	0.6
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	104	110	110	113	118	120	121	114	4.68
Alkalinity (mg/L as $\text{CaCO}_3$ )	16	0	128	128	130	132	133	133	143	132	3.44
Langelier saturation index (standard units)	15	0	-0.59	-0.46	-0.32	-0.15	0.1	0.22	0.27	-0.13	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	16	0	232	240	246	250	252	260	260	249	6.93
Calcium (mg/L as Ca)	16	0	37.4	37.5	39.1	40.3	42.4	44.1	44.6	40.5	2.23
Calcium (mg/L as $\text{CaCO}_3$ )	15	0	92	94	99.5	101	106	108	116	102	6
Magnesium (mg/L as Mg)	16	0	3.2	3.42	3.51	3.67	3.86	4.06	4.11	3.69	0.25
Sodium (mg/L as Na)	16	0	33.5	34.3	34.9	36.9	37.8	39.7	43	36.8	2.39
Potassium (mg/L as K)	16	0	2.08	2.13	2.24	2.43	2.74	3.02	3.03	2.5	0.32
Bicarbonate (mg/L as $\text{CaCO}_3$ )	16	0	127	127	129	131	132	132	142	131	3.33
Carbonate (mg/L as $\text{CaCO}_3$ )	16	7	<1	<1	<1	1.05	1.13	1.18	1.32	1.07	0.09
Sulfate (mg/L as $\text{SO}_4$ )	16	0	28.5	29.3	31.6	36.1	36.9	38.3	38.9	34.7	3.48
Chloride (mg/L as Cl)	16	0	15.1	16.1	16.8	18.1	19.3	22.1	22.2	18.4	2.16
Fluoride (mg/L as F)	16	0	0.6	0.6	0.64	0.67	0.75	0.81	0.83	0.69	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	34	34.1	35.1	36.2	38.1	38.9	41.8	36.6	2.33
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	8	<0.05	--	<0.05	<0.05	<0.05	--	0.08	0.05	0.01
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	13	12	<40	<40	<40	<40	<40	<40	61	42	6
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	16	0	7	7	8	9	10	11	12	9	2
Barium ( $\mu\text{g}/\text{L}$ as Ba)	13	0	76	77	84	86	89	94	98	86	6
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	0	85	98	102	113	126	146	164	117	22
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	0	2	--	2	2	3	--	3	2	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	13	13	<5	<5	<5	<5	<5	<5	<5	<5	0
Iron ( $\mu\text{g}/\text{L}$ as Fe)	16	5	<10	<10	<10	11	16	23	27	14	5
Lead ( $\mu\text{g}/\text{L}$ as Pb)	16	16	<2	<2	<2	<2	<2	<2	<2	<2	0
Lithium (mg/L as Li)	3	0	0.03	--	--	0.04	--	--	0.05	0.04	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	16	2	<2	<2	3	3	4	4	5	3	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	11	11	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	3	3	<2	--	--	<2	--	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	13	0	241	249	251	277	297	325	342	280	31
Vanadium ( $\mu\text{g}/\text{L}$ as V)	11	11	<10	<10	<10	<10	<10	<10	<10	<10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	13	2	<5	<5	7	9	14	15	22	10	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	12	8	<1	<1	<1	<1	1	1.29	2.84	1.18	0.53

**Table 70.--Construction information and summary statistics for water-quality data for Thomas 6**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'20"	Well capacity (gal/min): 2,530	Ground elevation (ft asl): 5,412
Longitude: 106°33'04"	Cased depth (ft bls): 1,536	Static water level (ft bls): 545.77
Date drilled: 1990	Screened interval (ft bls): 760-1,520	Static water level date: 2/23/98

**Summary statistics (data from 1990 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	15	0	408	441	486	535	548	583	602	521	51.4
pH, field (standard units)	15	0	7.02	7.24	7.43	7.55	7.62	7.72	7.75	7.51	0.19
pH, lab (standard units)	14	0	7.12	7.43	7.69	7.77	7.85	7.92	8.03	7.73	0.22
Eh, field (mV)	13	0	-71	-1	46	100	166	197	290	105	100
Temperature, field (deg C)	15	0	22.7	23.1	23.3	23.4	24.3	25	25.3	23.8	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	155	160	160	165	170	173	173	165	5.65
Alkalinity (mg/L as $\text{CaCO}_3$ )	15	0	115	125	126	128	130	131	131	127	3.94
Langelier saturation index (standard units)	14	0	-0.49	-0.31	-0.08	0.06	0.09	0.17	0.24	-0.02	0.19
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	15	0	260	312	316	328	336	354	368	326	23.3
Calcium (mg/L as Ca)	15	0	49.4	52	53.4	58.2	64.1	65.6	84.9	59.9	8.6
Calcium (mg/L as $\text{CaCO}_3$ )	14	0	124	130	142	145	150	151	159	144	8.65
Magnesium (mg/L as Mg)	15	0	3.83	3.95	4.33	4.81	5.16	6.1	6.17	4.82	0.68
Sodium (mg/L as Na)	15	0	30	36.3	38.6	41.9	44.5	51.4	51.9	42.4	5.58
Potassium (mg/L as K)	15	0	1.92	2.22	2.48	2.87	3.22	3.4	3.89	2.85	0.49
Bicarbonate (mg/L as $\text{CaCO}_3$ )	15	0	115	124	125	128	129	130	130	126	3.84
Carbonate (mg/L as $\text{CaCO}_3$ )	15	14	<1	<1	<1	<1	<1	<1	1.3	1.02	0.08
Sulfate (mg/L as $\text{SO}_4$ )	15	0	23.8	24.6	25.5	29.7	31.9	33.1	33.5	29.2	3.31
Chloride (mg/L as Cl)	15	0	62.4	64.8	67.1	68.1	76	81.7	88	71.4	7.17
Fluoride (mg/L as F)	15	0	0.48	0.5	0.5	0.55	0.7	0.85	0.92	0.61	0.14
Bromide (mg/L as Br)	6	6	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	10	0	28.7	28.9	32.4	34.6	36.6	37.5	37.5	34	3.18
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	0.5	0.11	0.16
Nitrate (mg/L as N)	8	3	<0.05	--	<0.05	0.16	0.18	--	0.95	0.22	0.3
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	12	11	<40	<40	<40	<40	<40	<40	62	42	6
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	7	6	<2	--	<2	<2	<2	--	2	2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	15	0	4	4	5	6	7	12	13	7	2
Barium ( $\mu\text{g}/\text{L}$ as Ba)	12	0	104	117	159	166	174	176	181	159	24
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	0	79	80	99	122	153	159	161	122	29
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	7	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	7	5	<1	--	<1	<1	1	--	2	1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	12	12	<5	<5	<5	<5	<5	<5	<5	<5	0
Iron ( $\mu\text{g}/\text{L}$ as Fe)	15	1	<10	12	16	21	31	83	105	30	27
Lead ( $\mu\text{g}/\text{L}$ as Pb)	15	14	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	3	0	0.02	--	--	0.03	--	--	0.05	0.04	0.02
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	15	0	7	9	9	12	20	29	48	16	11
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	10	10	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	3	3	<2	--	--	<2	--	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	12	0	283	294	361	382	405	456	480	380	57
Vanadium ( $\mu\text{g}/\text{L}$ as V)	9	9	<10	--	<10	<10	<10	--	<10	<10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	12	0	5	6	8	11	13	19	26	12	6
<b>Carbon</b>											
Total organic carbon (mg/L as C)	10	8	<1	<1	<1	<1	<1	1.52	1.54	1.1	0.22

**Table 71.--Construction information and summary statistics for water-quality data for Thomas 7**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'12"	Well capacity (gal/min): 2,530	Ground elevation (ft asl): 5,347
Longitude: 106°33'39"	Cased depth (ft bls): 1,475	Static water level (ft bls): 481.96
Date drilled: 1990	Screened interval (ft bls): 659-1,460	Static water level date: 2/23/98

**Summary statistics (data from 1990 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	16	0	336	351	374	399	409	418	429	391	25.5
pH, field (standard units)	16	0	7.19	7.27	7.47	7.63	7.73	7.77	7.86	7.59	0.18
pH, lab (standard units)	15	0	7.3	7.6	7.73	7.88	7.93	8	8.04	7.81	0.19
Eh, field (mV)	14	0	-73	97	109	151	208	256	457	163	115
Temperature, field (deg C)	16	0	19.3	20.1	21.05	21.3	21.95	22.4	22.6	21.3	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	115	116	118	122	126	127	129	122	4.27
Alkalinity (mg/L as $\text{CaCO}_3$ )	16	0	112	121	126	127	129	130	130	126	4.58
Langelier saturation index (standard units)	15	0	-0.55	-0.44	-0.19	-0.02	0.05	0.09	0.1	-0.1	0.19
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	16	0	232	236	250	258	262	288	292	258	16
Calcium (mg/L as Ca)	15	0	41.2	41.3	42.3	42.7	45	50.6	54.2	44.4	3.73
Calcium (mg/L as $\text{CaCO}_3$ )	15	0	103	103	104	106	113	114	117	108	4.88
Magnesium (mg/L as Mg)	16	0	3.53	3.56	3.74	3.93	4.23	4.51	5.03	4.02	0.39
Sodium (mg/L as Na)	16	0	33	33.7	34.4	35.8	37	38.3	42	36.1	2.22
Potassium (mg/L as K)	16	0	2.26	2.29	2.33	2.65	2.82	2.97	3.48	2.65	0.32
Bicarbonate (mg/L as $\text{CaCO}_3$ )	16	0	112	121	125	127	128	129	129	125	4.36
Carbonate (mg/L as $\text{CaCO}_3$ )	16	12	<1	<1	<1	<1	1.02	1.18	1.32	1.04	0.09
Sulfate (mg/L as $\text{SO}_4$ )	16	0	27.6	29.2	31.4	34.5	37	37.4	38.6	34	3.36
Chloride (mg/L as Cl)	16	0	20	21.4	24.3	26.9	29.8	32.7	34.5	27.2	3.97
Fluoride (mg/L as F)	16	0	0.56	0.56	0.59	0.65	0.72	0.83	0.88	0.67	0.09
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	32.1	32.8	33	35	38.1	38.1	40.6	35.6	2.65
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	8	<0.05	--	<0.05	<0.05	<0.05	--	0.5	0.11	0.15
Nitrate (mg/L as N)	9	3	<0.05	--	<0.05	0.12	0.14	--	0.23	0.11	0.06
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	13	12	<40	<40	<40	<40	<40	<40	42	40	1
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	16	0	4	4	5	6	7	9	9	6	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	13	0	96	99	107	108	111	115	119	108	6
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	0	94	106	115	123	142	160	209	131	30
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	1	<1	--	1	2	2	--	3	2	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	13	12	<5	<5	<5	<5	<5	<5	6	5	0
Iron ( $\mu\text{g}/\text{L}$ as Fe)	16	8	<10	<10	<10	10	16	35	97	19	22
Lead ( $\mu\text{g}/\text{L}$ as Pb)	16	12	<2	<2	<2	<2	<2	3	5	2	1
Lithium (mg/L as Li)	3	0	0.03	--	--	0.03	--	--	0.04	0.03	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	16	1	<2	2	3	4	5	6	28	5	6
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	11	11	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	3	3	<2	--	--	<2	--	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	13	0	250	264	274	303	328	368	378	306	41
Vanadium ( $\mu\text{g}/\text{L}$ as V)	11	11	<10	<10	<10	<10	<10	<10	<10	<10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	13	4	<5	<5	<5	8	11	28	46	13	13
<b>Carbon</b>											
Total organic carbon (mg/L as C)	11	10	<1	<1	<1	<1	<1	<1	1.32	1.03	0.1

**Table 72.—Construction information and summary statistics for water-quality data for Thomas 8**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'12"	Well capacity (gal/min): 2,060	Ground elevation (ft asl): 5,462
Longitude: 106°32'31"	Cased depth (ft bls): 1,655	Static water level (ft bls): 605.77
Date drilled: 1991	Screened interval (ft bls): 835-1,635	Static water level date: 2/23/98

**Summary statistics (data from 1993 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	22	0	443	457	496	579	596	596	610	550	57
pH, field (standard units)	22	0	7.34	7.42	7.47	7.58	7.64	7.74	7.86	7.57	0.13
pH, lab (standard units)	22	0	7.64	7.7	7.76	7.83	7.87	7.92	8.01	7.82	0.09
Eh, field (mV)	21	0	-43	-7	50	85	131	173	317	91	80
Temperature, field (deg C)	22	0	23.8	25.6	25.7	25.95	26.6	27.6	27.8	26.2	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	21	0	176	176	180	182	188	191	202	184	6.53
Alkalinity (mg/L as $\text{CaCO}_3$ )	22	0	115	116	118	119	124	128	135	121	5.6
Langelier saturation index (standard units)	22	0	-0.07	-0.06	0	0.11	0.18	0.24	0.36	0.1	0.12
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	22	0	340	344	356	368	388	396	420	372	21.5
Calcium (mg/L as Ca)	22	0	58.4	63.3	63.9	69.6	71.2	77.9	88.1	69.6	6.67
Calcium (mg/L as $\text{CaCO}_3$ )	22	0	124	158	162	167	172	176	177	165	11.4
Magnesium (mg/L as Mg)	22	0	3.28	3.84	4.05	4.34	4.73	5.47	5.74	4.41	0.61
Sodium (mg/L as Na)	22	0	32.5	35.6	37.5	39.5	41.7	44.1	46.4	39.7	3.49
Potassium (mg/L as K)	22	0	2.69	3.09	3.27	3.39	3.86	4.92	5.13	3.68	0.69
Bicarbonate (mg/L as $\text{CaCO}_3$ )	22	0	114	115	117	118	123	127	134	120	5.6
Carbonate (mg/L as $\text{CaCO}_3$ )	22	19	<1	<1	<1	<1	<1	1	1.13	1.01	0.03
Sulfate (mg/L as $\text{SO}_4$ )	22	0	27.4	27.7	27.9	28.4	30.4	33.2	33.5	29.3	1.98
Chloride (mg/L as Cl)	22	0	75.8	76.9	82.8	86.2	87.8	88.3	91.2	84.4	4.56
Fluoride (mg/L as F)	22	0	0.41	0.42	0.44	0.47	0.55	0.56	0.63	0.48	0.06
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	22	0	24.6	27.3	30.5	32	33.8	36.5	39	32	3.42
<b>Nutrients</b>											
Nitrite (mg/L as N)	10	10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0
Nitrate (mg/L as N)	22	20	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.41	0.08	0.1
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	10	10	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	22	0	10	10	11	13	15	25	26	14	5
Barium ( $\mu\text{g/L}$ as Ba)	10	0	117	142	188	198	224	234	244	198	36
Beryllium ( $\mu\text{g/L}$ as Be)	10	10	<1	<1	<1	<1	<1	<1	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	10	0	150	153	162	184	192	331	386	205	73
Cadmium ( $\mu\text{g/L}$ as Cd)	10	8	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	0.9	0.2	0.3
Chromium ( $\mu\text{g/L}$ as Cr)	10	10	<1	<1	<1	<1	<1	<1	<1	<1	0
Copper ( $\mu\text{g/L}$ as Cu)	10	9	<5	<5	<5	<5	<5	6	7	5	1
Iron ( $\mu\text{g/L}$ as Fe)	22	0	38	42	51	59	84	257	727	127	172
Lead ( $\mu\text{g/L}$ as Pb)	22	20	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	--	--	--	--	--	--	--	--	--	--	--
Manganese ( $\mu\text{g/L}$ as Mn)	22	0	28	36	38	44	56	137	167	60	38
Nickel ( $\mu\text{g/L}$ as Ni)	10	10	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	--	--	--	--	--	--	--	--	--	--	--
Strontium ( $\mu\text{g/L}$ as Sr)	10	0	434	437	443	508	531	602	622	504	64
Vanadium ( $\mu\text{g/L}$ as V)	10	9	<10	<10	<10	<10	<10	11	12	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	10	1	<5	5	6	9	12	17	21	10	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	7	<1	--	<1	<1	<1	--	1.33	1.06	0.13

**Table 73.--Construction information and summary statistics for water-quality data for Vol Andia 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'05"	Well capacity (gal/min): 3,110	Ground elevation (ft asl): 5,144
Longitude: 106°35'48"	Cased depth (ft bls): 972	Static water level (ft bls): 262.99
Date drilled: 1960	Screened interval (ft bls): 300-972	Static water level date: 1/12/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	31	0	240	260	330	375	399	446	463	369	61.9
pH, field (standard units)	30	0	7.3	7.55	7.73	7.85	8	8.15	8.5	7.85	0.25
pH, lab (standard units)	16	0	7.41	7.8	7.89	7.92	8.02	8.08	8.13	7.91	0.16
Eh, field (mV)	15	0	95	112	128	173	288	425	485	217	116
Temperature, field (deg C)	31	0	12.5	17	17	17.2	17.3	18	18.6	17	1.2
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	143	144	153	168	170	185	214	167	18.2
Alkalinity (mg/L as $\text{CaCO}_3$ )	30	0	101	106	107	110	114	120	124	112	5.51
Langelier saturation index (standard units)	27	0	-0.44	-0.3	0.06	0.17	0.3	0.37	0.8	0.14	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	195	220	232	244	280	300	364	256	35.6
Calcium (mg/L as Ca)	20	0	46.7	47.1	50.7	54.7	59.2	62.2	73.8	55.3	6.66
Calcium (mg/L as $\text{CaCO}_3$ )	28	0	90.8	122	125	135	147	156	186	137	17.3
Magnesium (mg/L as Mg)	18	0	5.3	5.38	5.65	6.62	6.95	7.47	8.83	6.5	0.91
Sodium (mg/L as Na)	20	0	17.2	18.2	19.9	21.2	22.2	22.7	22.7	20.8	1.68
Potassium (mg/L as K)	18	0	2.04	2.05	2.2	2.28	2.46	2.83	3.04	2.37	0.27
Bicarbonate (mg/L as $\text{CaCO}_3$ )	31	0	100	105	106	109	116	120	143	112	8.07
Carbonate (mg/L as $\text{CaCO}_3$ )	31	19	<1	<1	<1	<1	1.19	1.55	1.96	1.15	0.26
Sulfate (mg/L as $\text{SO}_4$ )	31	0	44.7	49.2	50	51.7	75.1	80.5	107	60.4	15.3
Chloride (mg/L as Cl)	31	0	6.16	11.6	12.7	13.5	16.1	17	20.7	14	2.59
Fluoride (mg/L as F)	29	0	0.35	0.37	0.41	0.45	0.48	0.51	0.53	0.44	0.05
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	26.2	28.4	29	31.6	32.2	33.2	36.6	31.2	2.74
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.68	--	0.84	0.88	0.89	--	1.06	0.87	0.11
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	94	43	13
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	32	0	4	5	6	7	7	8	8	7	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	96	102	105	123	132	141	195	123	23
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	4	<50	<50	<50	51	61	75	75	57	10
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	13	<5	<5	<5	<5	<5	9	31	7	6
Iron ( $\mu\text{g/L}$ as Fe)	20	14	<10	<10	<10	<10	11	18	25	12	4
Lead ( $\mu\text{g/L}$ as Pb)	31	26	<2	<2	<2	<2	<2	2	17	3	3
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.03	0.03	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	20	4	<2	<2	2	2	3	3	4	3	1
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	370	377	396	423	454	541	628	439	68
Vanadium ( $\mu\text{g/L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	17	8	<5	<5	<5	5	7	9	12	6	2
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	9	<1	<1	<1	<1	1.22	1.51	2.65	1.18	0.42

**Table 74.--Construction information and summary statistics for water-quality data for Vol Andia 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'31"	Well capacity (gal/min): 3,150	Ground elevation (ft asl): 5,208
Longitude: 106°35'02"	Cased depth (ft bls): 852	Static water level (ft bls): 340.29
Date drilled: 1960	Screened interval (ft bls): 360-852	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	25	0	191	210	256	296	301	307	380	279	42.3
pH, field (standard units)	25	0	7.28	7.53	7.81	7.85	8	8.1	8.12	7.85	0.22
pH, lab (standard units)	15	0	7.54	7.6	7.78	7.96	8.04	8.21	8.76	7.96	0.29
Eh, field (mV)	14	0	91	105	119	173	207	326	332	181	80
Temperature, field (deg C)	26	0	15	17	17.5	17.5	17.6	18	19	17.5	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	108	108	110	112	113	114	114	111	2.21
Alkalinity (mg/L as $\text{CaCO}_3$ )	26	0	85.9	97.6	99.6	101	102	110	111	101	4.99
Langelier saturation index (standard units)	21	0	-0.61	-0.2	-0.07	0	0.2	0.22	0.23	0	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	26	0	108	160	178	192	204	210	245	189	26.4
Calcium (mg/L as Ca)	19	0	34.3	36.5	37.9	38.8	42.4	44	45.9	39.6	2.89
Calcium (mg/L as $\text{CaCO}_3$ )	23	0	87.6	94	97	101	114	127	160	107	16.7
Magnesium (mg/L as Mg)	17	0	3.81	3.87	4.01	4.09	4.21	4.45	4.73	4.12	0.22
Sodium (mg/L as Na)	19	0	15.4	15.9	16.2	17.6	18.3	19.8	22.2	17.7	1.65
Potassium (mg/L as K)	17	0	1.19	1.43	1.78	1.85	2	2.12	2.21	1.85	0.25
Bicarbonate (mg/L as $\text{CaCO}_3$ )	26	0	81.1	96.7	98.8	99.8	101	109	111	100	5.57
Carbonate (mg/L as $\text{CaCO}_3$ )	26	16	<1	<1	<1	<1	1.23	1.8	4.49	1.27	0.7
Sulfate (mg/L as $\text{SO}_4$ )	25	0	18.7	26.4	28.7	29.5	30.9	32.6	34.9	29.3	3.04
Chloride (mg/L as Cl)	26	0	4.57	8.67	9.07	9.65	9.84	10.2	16.2	9.55	1.73
Fluoride (mg/L as F)	26	0	0.22	0.42	0.46	0.49	0.52	0.53	0.56	0.48	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	10	0	29.2	29.4	31	33	33.8	34.1	34.2	32.2	1.86
<b>Nutrients</b>											
Nitrite (mg/L as N)	7	7	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	8	0	0.83	--	0.94	1.16	1.26	--	1.4	1.12	0.2
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	93	43	13
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	27	0	5	5	5	6	6	7	7	6	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	75	80	83	87	89	118	125	91	14
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	11	7	<50	<50	<50	<50	55	59	65	53	5
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	7	3	<0.1	--	<0.1	0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	7	7	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	11	<5	<5	<5	<5	7	23	176	18	43
Iron ( $\mu\text{g}/\text{L}$ as Fe)	19	15	<10	<10	<10	<10	<10	25	354	29	79
Lead ( $\mu\text{g}/\text{L}$ as Pb)	26	22	<2	<2	<2	<2	<2	2	17	3	3
Lithium (mg/L as Li)	4	0	0.02	--	0.02	0.02	0.03	--	0.03	0.02	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	19	17	<2	<2	<2	<2	<2	2	7	2	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	13	<5	<5	<5	<5	<5	<5	16	6	3
Selenium ( $\mu\text{g}/\text{L}$ as Se)	8	7	<2	--	<2	<2	<2	--	2	2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	219	225	237	249	259	307	307	253	25
Vanadium ( $\mu\text{g}/\text{L}$ as V)	12	11	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	5	<5	<5	<5	7	10	30	38	11	10
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	12	<1	<1	<1	<1	<1	1.24	1.85	1.08	0.22

**Table 75.--Construction information and summary statistics for water-quality data for Vol Andia 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°07'41"	Well capacity (gal/min): 2,430	Ground elevation (ft asl): 5,110
Longitude: 106°36'16"	Cased depth (ft bls): 900	Static water level (ft bls): 230.01
Date drilled: 1960	Screened interval (ft bls): 264-900	Static water level date: 1/8/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	30	0	220	260	319	375	401	408	422	358	55.6
pH, field (standard units)	30	0	7.32	7.54	7.73	7.86	7.95	8.01	8.38	7.82	0.21
pH, lab (standard units)	17	0	7.47	7.6	7.84	7.93	7.96	8.03	8.25	7.88	0.18
Eh, field (mV)	15	0	98	115	150	173	277	479	678	245	164
Temperature, field (deg C)	30	0	16.1	17.9	18	18	18.1	19	21.1	18.1	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	16	0	134	140	144	147	151	153	159	147	5.98
Alkalinity (mg/L as $\text{CaCO}_3$ )	30	0	96.4	99.1	100	101	104	111	113	103	4.08
Langelier saturation index (standard units)	28	0	-0.4	-0.24	-0.1	0.1	0.13	0.4	0.57	0.05	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	208	220	230	245	262	280	284	247	21.6
Calcium (mg/L as Ca)	21	0	41.8	43.9	47.1	51.2	53.4	54.6	55.9	50.1	4.27
Calcium (mg/L as $\text{CaCO}_3$ )	28	0	82.1	116	119	123	130	137	153	124	12.3
Magnesium (mg/L as Mg)	19	0	4.78	5.45	5.8	6.64	6.87	7.04	7.92	6.41	0.71
Sodium (mg/L as Na)	21	0	18.3	18.7	19.7	21.1	22.4	22.6	24.3	21	1.58
Potassium (mg/L as K)	19	0	2.56	2.56	2.61	2.85	2.98	3.05	3.54	2.84	0.24
Bicarbonate (mg/L as $\text{CaCO}_3$ )	32	0	95.4	98.1	99.4	101	104	110	112	102	4.26
Carbonate (mg/L as $\text{CaCO}_3$ )	31	22	<1	<1	<1	<1	1.03	1.49	1.83	1.12	0.23
Sulfate (mg/L as $\text{SO}_4$ )	31	0	33.8	50.4	54.1	56.7	59.2	65.7	68.7	56.1	7.07
Chloride (mg/L as Cl)	31	2	<4	9.85	16.1	17.8	19.7	22.2	32.8	17.2	5.78
Fluoride (mg/L as F)	31	0	0.41	0.42	0.44	0.49	0.52	0.54	0.65	0.49	0.05
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	31.7	35.5	35.7	37.3	39.1	40.4	47.1	37.9	3.83
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.28	--	0.34	0.42	0.54	--	0.56	0.43	0.11
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	18	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	33	0	5	6	6	7	7	8	10	7	1
Barium ( $\mu\text{g/L}$ as Ba)	18	0	91	91	95	100	108	122	195	107	24
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	1	<50	54	56	58	74	86	103	67	16
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g/L}$ as Cu)	18	13	<5	<5	<5	<5	5	10	10	6	2
Iron ( $\mu\text{g/L}$ as Fe)	21	14	<10	<10	<10	<10	10	12	31	11	5
Lead ( $\mu\text{g/L}$ as Pb)	32	31	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	5	0	0.02	--	0.02	0.03	0.03	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	21	16	<2	<2	<2	<2	<2	2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	337	344	381	403	435	475	514	409	46
Vanadium ( $\mu\text{g/L}$ as V)	14	12	<10	<10	<10	<10	<10	10	11	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	18	14	<5	<5	<5	<5	<5	14	22	7	4
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	14	<1	<1	<1	<1	<1	1.48	1.86	1.09	0.24

**Table 76.--Construction information and summary statistics for water-quality data for Vol Andia 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'03"	Well capacity (gal/min): 2,970	Ground elevation (ft asl): 5,200
Longitude: 106°35'12"	Cased depth (ft bls): 876	Static water level (ft bls): 327.37
Date drilled: 1960	Screened interval (ft bls): 372-876	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	31	0	210	220	270	313	325	341	390	298	45.5
pH, field (standard units)	29	0	7.29	7.56	7.69	7.88	8	8.13	8.2	7.84	0.21
pH, lab (standard units)	16	0	7.23	7.6	7.83	7.95	8.01	8.21	8.91	7.93	0.34
Eh, field (mV)	15	0	84	105	166	184	324	327	489	228	106
Temperature, field (deg C)	31	0	16	16.7	16.9	17	17.1	18	20.8	17.2	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	117	119	120	124	130	137	142	126	7.2
Alkalinity (mg/L as $\text{CaCO}_3$ )	31	0	89.2	104	106	108	110	117	126	109	6.22
Langelier saturation index (standard units)	25	0	-0.54	-0.3	-0.08	0.1	0.2	0.3	0.5	0.05	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	31	0	170	185	188	204	224	228	252	207	20
Calcium (mg/L as Ca)	21	0	36.4	38.4	40.7	43	46.3	46.8	49.5	43	3.69
Calcium (mg/L as $\text{CaCO}_3$ )	27	0	84	101	103	107	111	135	140	110	12.4
Magnesium (mg/L as Mg)	19	0	4.3	4.49	4.52	4.77	5.32	5.55	5.67	4.93	0.43
Sodium (mg/L as Na)	21	0	15.6	16	16.3	16.9	18.4	19.9	21.8	17.5	1.72
Potassium (mg/L as K)	19	2	<1	<1	1.66	1.91	2.14	2.24	2.56	1.83	0.42
Bicarbonate (mg/L as $\text{CaCO}_3$ )	31	0	82.5	103	105	107	110	116	126	107	6.98
Carbonate (mg/L as $\text{CaCO}_3$ )	31	19	<1	<1	<1	<1	1.22	1.62	6.3	1.31	0.98
Sulfate (mg/L as $\text{SO}_4$ )	29	0	23.5	32.2	34	35.6	38	41	60.6	36.3	6.03
Chloride (mg/L as Cl)	31	0	4.59	8.01	8.5	9.49	9.99	11	16.8	9.61	2.13
Fluoride (mg/L as F)	30	0	0.37	0.39	0.42	0.45	0.48	0.5	0.52	0.45	0.04
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	25.8	26.9	30.1	30.9	32.4	33.7	41.2	31.5	3.99
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.8	--	0.84	0.91	1	--	1.06	0.93	0.1
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	92	43	12
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	32	0	4	6	7	8	8	9	9	7	1
Barium ( $\mu\text{g/L}$ as Ba)	18	0	79	80	81	92	103	128	141	96	17
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	8	<50	<50	<50	<50	63	70	70	55	8
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	18	12	<5	<5	<5	<5	6	7	9	6	1
Iron ( $\mu\text{g/L}$ as Fe)	21	15	<10	<10	<10	<10	11	12	16	11	1
Lead ( $\mu\text{g/L}$ as Pb)	31	29	<2	<2	<2	<2	<2	<2	6	2	1
Lithium (mg/L as Li)	5	0	0.02	--	0.02	0.03	0.03	--	0.03	0.02	0
Manganese ( $\mu\text{g/L}$ as Mn)	21	20	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	251	258	262	278	323	360	364	292	37
Vanadium ( $\mu\text{g/L}$ as V)	14	13	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	18	13	<5	<5	<5	<5	8	12	15	7	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	12	<1	<1	<1	<1	1	1.28	1.8	1.07	0.2

**Table 77.--Construction information and summary statistics for water-quality data for Vol Andia 5**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°08'05"	Well capacity (gal/min): 3,080	Ground elevation (ft asl): 5,112
Longitude: 106°36'09"	Cased depth (ft bls): 900	Static water level (ft bls): 228.07
Date drilled: 1960	Screened interval (ft bls): 260-900	Static water level date: 1/12/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	30	0	230	270	330	370	380	392	450	352	50.4
pH, field (standard units)	30	0	7.44	7.63	7.72	7.88	7.94	8	8.1	7.83	0.16
pH, lab (standard units)	15	0	7.27	7.79	7.8	7.95	8.02	8.12	8.18	7.92	0.21
Eh, field (mV)	14	0	119	127	140	169	263	318	521	214	109
Temperature, field (deg C)	30	0	16.7	17.15	17.5	17.6	17.8	18.5	21.1	17.8	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	15	0	121	129	140	142	145	151	152	141	7.68
Alkalinity (mg/L as $\text{CaCO}_3$ )	29	0	97.7	98	101	102	104	113	113	103	4.66
Langelier saturation index (standard units)	27	0	-0.3	-0.16	-0.05	0.1	0.19	0.3	0.5	0.09	0.19
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	30	0	220	229	235	248	255	271	348	250	22.9
Calcium (mg/L as Ca)	19	0	39.8	42.2	45.6	47.9	51.7	56.5	57.9	48.4	4.83
Calcium (mg/L as $\text{CaCO}_3$ )	25	0	94	110	119	125	130	135	169	126	14.9
Magnesium (mg/L as Mg)	18	0	5.04	5.39	5.8	6.05	6.47	6.79	6.96	6.08	0.51
Sodium (mg/L as Na)	20	0	2.91	17.5	18	20	21.2	22.1	23	19	4.14
Potassium (mg/L as K)	18	0	2.15	2.22	2.31	2.47	2.57	2.93	2.97	2.47	0.23
Bicarbonate (mg/L as $\text{CaCO}_3$ )	30	0	97.2	97.9	100	101	105	113	113	103	5
Carbonate (mg/L as $\text{CaCO}_3$ )	30	17	<1	<1	<1	<1	1.18	1.46	1.53	1.12	0.18
Sulfate (mg/L as $\text{SO}_4$ )	29	0	47.1	53.9	59.4	62.6	63.9	65	72.6	61.2	4.87
Chloride (mg/L as Cl)	30	0	6.31	10.8	14.1	15.3	16	17.3	55.4	15.8	7.89
Fluoride (mg/L as F)	28	0	0.39	0.4	0.45	0.48	0.51	0.55	0.62	0.48	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	26.2	28.6	29.2	34.1	36.1	39.5	47.7	34.2	5.91
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.13	--	0.23	0.27	0.3	--	0.35	0.26	0.06
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	31	0	6	6	6	7	8	8	8	7	1
Barium ( $\mu\text{g/L}$ as Ba)	17	0	73	75	83	91	102	122	146	95	18
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	7	<50	<50	<50	<50	66	71	83	57	11
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Copper ( $\mu\text{g/L}$ as Cu)	17	10	<5	<5	<5	<5	15	59	66	15	19
Iron ( $\mu\text{g/L}$ as Fe)	20	13	<10	<10	<10	<10	13	23	32	13	6
Lead ( $\mu\text{g/L}$ as Pb)	30	20	<2	<2	<2	<2	3	7	32	4	6
Lithium (mg/L as Li)	4	0	0.03	--	0.03	0.03	0.03	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	20	11	<2	<2	<2	<2	2	2	4	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	2	2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	326	326	353	394	434	468	570	400	63
Vanadium ( $\mu\text{g/L}$ as V)	13	11	<10	<10	<10	<10	<10	10	11	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	17	5	<5	<5	<5	5	12	30	42	12	11
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	11	<1	<1	<1	<1	1.11	1.3	2.65	1.15	0.41

**Table 78.—Construction Information and summary statistics for water-quality data for Vol Andia 6**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°08'26"	Well capacity (gal/min): 3,190	Ground elevation (ft asl): 5,178
Longitude: 106°35'25"	Cased depth (ft bls): 984	Static water level (ft bls): 294.95
Date drilled: 1960	Screened interval (ft bls): 324-984	Static water level date: 12/29/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	29	0	180	230	271	315	331	346	352	299	46.3
pH, field (standard units)	29	0	7.4	7.59	7.74	7.82	7.98	8.1	8.3	7.85	0.2
pH, lab (standard units)	14	0	7.2	7.8	7.93	8.02	8.07	8.11	8.18	7.95	0.24
Eh, field (mV)	14	0	1	93	117	136	192	261	536	171	123
Temperature, field (deg C)	29	0	15.8	16.3	16.5	16.7	17	18	19.4	16.9	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	120	121	122	124	129	136	140	127	6.18
Alkalinity (mg/L as $\text{CaCO}_3$ )	27	0	103	105	107	109	116	118	120	111	4.81
Langelier saturation index (standard units)	25	0	-0.44	-0.2	-0.03	0.01	0.2	0.3	0.42	0.05	0.2
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	28	0	165	175	189	205	213	240	248	204	21.8
Calcium (mg/L as Ca)	19	0	34.9	37.2	39.5	40.9	45.3	46.4	47.3	41.5	3.41
Calcium (mg/L as $\text{CaCO}_3$ )	26	0	94.1	98.5	102	106	120	129	148	111	13.6
Magnesium (mg/L as Mg)	17	0	4.15	4.65	4.76	5.06	5.63	5.89	6.15	5.15	0.54
Sodium (mg/L as Na)	19	0	13.7	16.6	17	17.7	18.9	20	21.4	17.9	1.64
Potassium (mg/L as K)	17	1	<1	1.7	1.9	2.15	2.24	2.61	2.73	2.11	0.4
Bicarbonate (mg/L as $\text{CaCO}_3$ )	28	0	102	103	105	108	113	117	119	109	4.98
Carbonate (mg/L as $\text{CaCO}_3$ )	28	11	<1	<1	<1	1.09	1.35	1.56	1.97	1.21	0.29
Sulfate (mg/L as $\text{SO}_4$ )	28	0	29.1	31.6	34.3	36.7	39.5	44.2	46.8	36.9	4.18
Chloride (mg/L as Cl)	28	0	4.34	7.83	8.47	8.77	9.46	9.76	20.5	9.14	2.45
Fluoride (mg/L as F)	28	0	0.35	0.38	0.41	0.44	0.48	0.51	0.6	0.44	0.05
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	11	0	21.7	27	29.7	30.9	31.9	33.2	38.9	30.6	4.14
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	9	0	0.52	--	0.56	0.62	0.64	--	0.82	0.62	0.09
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	14	<40	<40	<40	<40	<40	40	43	40	1
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	30	0	6	6	7	8	8	9	9	8	1
Barium ( $\mu\text{g/L}$ as Ba)	16	0	98	109	117	126	146	164	169	132	21
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	4	<50	<50	<50	52	61	71	76	56	9
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	16	11	<5	<5	<5	<5	7	13	40	8	9
Iron ( $\mu\text{g/L}$ as Fe)	19	9	<10	<10	<10	10	22	35	1350	85	307
Lead ( $\mu\text{g/L}$ as Pb)	29	28	<2	<2	<2	<2	<2	<2	5	2	1
Lithium (mg/L as Li)	3	0	0.03	--	--	0.03	--	--	0.03	0.03	0
Manganese ( $\mu\text{g/L}$ as Mn)	19	3	<2	<2	3	3	3	5	12	3	2
Nickel ( $\mu\text{g/L}$ as Ni)	14	14	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	235	262	285	303	363	390	395	319	50
Vanadium ( $\mu\text{g/L}$ as V)	12	10	<10	<10	<10	<10	<10	10	15	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	16	8	<5	<5	<5	6	9	21	21	9	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	9	<1	<1	<1	<1	1.29	1.38	1.52	1.11	0.18

**Table 79.--Construction information and summary statistics for water-quality data for Volcano Cliffs 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°09'35"	Well capacity (gal/min): 2,220	Ground elevation (ft asl): 5,335
Longitude: 106°43'43"	Cased depth (ft bls): 1,080	Static water level (ft bls): 470.31
Date drilled: 1968	Screened interval (ft bls): 528-1,056	Static water level date: 1/12/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	70	0	230	263	330	379	384	390	500	356	53.3
pH, field (standard units)	72	0	7.08	7.75	7.84	8	8.17	8.3	9.6	8.01	0.32
pH, lab (standard units)	34	0	7.57	8.02	8.08	8.16	8.19	8.22	9.2	8.15	0.22
Eh, field (mV)	28	0	59	103	137	196	357	564	669	259	166
Temperature, field (deg C)	71	0	17	23.5	23.8	23.9	24.6	24.7	27	24	1.1
Hardness (mg/L as $\text{CaCO}_3$ )	28	0	52	64	66	67.7	70.3	72	74.9	67.7	4.28
Alkalinity (mg/L as $\text{CaCO}_3$ )	67	0	113	118	120	121	127	132	137	123	5.4
Langelier saturation index (standard units)	65	0	-0.9	-0.3	-0.16	0.01	0.2	0.4	1.6	0.04	0.36
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	67	0	236	260	272	280	290	300	336	281	17.1
Calcium (mg/L as Ca)	31	0	13.4	17.4	18.7	20	21.2	21.8	24.3	19.7	2.09
Calcium (mg/L as $\text{CaCO}_3$ )	63	0	41	48	50	52.6	55.6	62.6	76.6	54	6.8
Magnesium (mg/L as Mg)	29	0	3.01	3.85	4.16	4.39	4.63	4.77	5.07	4.32	0.47
Sodium (mg/L as Na)	31	0	37.3	45.4	48.3	52.8	56.8	60	64.8	52.7	6.36
Potassium (mg/L as K)	29	0	4.26	5.09	5.88	6.26	6.77	6.99	7.26	6.19	0.72
Bicarbonate (mg/L as $\text{CaCO}_3$ )	68	0	111	116	118	120	127	131	136	122	5.67
Carbonate (mg/L as $\text{CaCO}_3$ )	68	8	<1	<1	1.31	1.6	1.86	2.25	19.6	1.89	2.22
Sulfate (mg/L as $\text{SO}_4$ )	68	0	39.3	46.8	48.1	48.9	49.6	51.1	54.3	48.8	2.42
Chloride (mg/L as Cl)	68	0	7.28	7.63	7.87	8.3	8.68	9.16	11	8.34	0.65
Fluoride (mg/L as F)	64	0	0.82	0.93	0.97	1	1.03	1.08	1.29	1.01	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	24	0	53	58	66.5	68.9	73.6	78.7	93.9	69.5	8.31
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	23	0	1.43	1.53	1.61	1.66	1.72	1.77	2.18	1.67	0.15
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	15	14	<40	<40	<40	<40	<40	<40	98	44	15
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	73	0	9	12	13	14	15	17	19	14	2
Barium ( $\mu\text{g/L}$ as Ba)	15	0	33	44	48	55	62	72	79	56	11
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	11	0	101	111	128	163	188	191	242	163	40
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	4	--	5	6	6	--	7	6	1
Copper ( $\mu\text{g/L}$ as Cu)	15	12	<5	<5	<5	<5	<5	6	22	6	4
Iron ( $\mu\text{g/L}$ as Fe)	32	24	<10	<10	<10	<10	<10	14	82	13	13
Lead ( $\mu\text{g/L}$ as Pb)	71	66	<2	<2	<2	<2	<2	<2	5	2	1
Lithium (mg/L as Li)	2	0	0.04	--	--	0.04	--	--	0.05	0.04	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	32	32	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel ( $\mu\text{g/L}$ as Ni)	13	13	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	5	5	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	15	0	193	270	295	305	352	366	425	316	52
Vanadium ( $\mu\text{g/L}$ as V)	11	0	17	18	22	24	26	27	37	24	5
Zinc ( $\mu\text{g/L}$ as Zn)	15	11	<5	<5	<5	<5	5	14	15	6	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	13	11	<1	<1	<1	<1	<1	1.47	2.09	1.12	0.32

**Table 80.--Construction information and summary statistics for water-quality data for Voicano Cliffs 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°09'12"	Well capacity (gal/min): 2,060	Ground elevation (ft asl): 5,328
Longitude: 106°43'41"	Cased depth (ft bls): 900	Static water level (ft bls): 460
Date drilled: 1968	Screened interval (ft bls): 528-876	Static water level date: 3/21/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	84	0	220	260	329	361	377	380	410	344	46
pH, field (standard units)	86	0	7.35	7.76	7.91	8	8.17	8.22	8.7	8	0.21
pH, lab (standard units)	45	0	7.7	7.96	8.04	8.1	8.16	8.19	8.28	8.08	0.1
Eh, field (mV)	42	0	74	99	129	173	252	394	696	216	138
Temperature, field (deg C)	85	0	17	23	23.7	24	24.1	24.2	31	23.8	1.4
Hardness (mg/L as CaCO <sub>3</sub> )	37	0	68	69	70	72	72.7	74.4	88	72	3.29
Alkalinity (mg/L as CaCO <sub>3</sub> )	85	0	107	114	116	118	122	129	166	121	8.86
Langelier saturation index (standard units)	82	0	-0.63	-0.22	-0.07	0.03	0.2	0.3	0.7	0.05	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	86	0	220	245	262	272	282	292	365	273	22.3
Calcium (mg/L as Ca)	43	0	15.4	18.7	19.2	21	21.9	22.8	26.6	20.8	1.88
Calcium (mg/L as CaCO <sub>3</sub> )	77	0	50	50.9	52.5	54.3	58.5	64.4	73	56.2	5.42
Magnesium (mg/L as Mg)	41	0	3.69	4.15	4.47	4.72	4.92	5.08	5.35	4.69	0.39
Sodium (mg/L as Na)	43	0	27.3	40.2	45.4	48.8	50.8	52.5	55	47.6	4.99
Potassium (mg/L as K)	41	0	4.57	5.61	6.1	6.63	6.96	7.11	8.01	6.45	0.72
Bicarbonate (mg/L as CaCO <sub>3</sub> )	86	0	105	113	114	117	121	128	154	119	8.07
Carbonate (mg/L as CaCO <sub>3</sub> )	86	14	<1	<1	1.18	1.4	1.73	2.52	11.5	1.68	1.23
Sulfate (mg/L as SO <sub>4</sub> )	85	0	39	42.8	44.7	45.8	47.6	49.5	62	46.3	3.64
Chloride (mg/L as Cl)	86	0	4.19	7.06	7.3	7.8	8.18	8.73	16.9	7.9	1.41
Fluoride (mg/L as F)	82	0	0.62	0.9	0.94	0.99	1.03	1.07	1.39	0.99	0.09
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	34	0	47.1	59.1	67.4	70.3	72.7	79.2	83	69.6	7.59
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	32	0	0.89	1.51	1.63	1.68	1.74	1.83	3.31	1.71	0.34
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	18	16	<40	<40	<40	<40	<40	82	103	46	17
Antimony (µg/L as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic (µg/L as As)	87	0	7	10	11	11	12	13	31	12	3
Barium (µg/L as Ba)	18	0	44	48	55	58	64	80	83	60	10
Beryllium (µg/L as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	13	0	92	123	147	157	163	214	218	160	35
Cadmium (µg/L as Cd)	9	8	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium (µg/L as Cr)	9	0	4	--	5	5	6	--	7	5	1
Copper (µg/L as Cu)	18	15	<5	<5	<5	<5	<5	16	20	7	4
Iron (µg/L as Fe)	44	36	<10	<10	<10	<10	<10	14	114	15	19
Lead (µg/L as Pb)	85	70	<2	<2	<2	<2	<2	2	61	3	8
Lithium (mg/L as Li)	4	0	0.05	--	0.05	0.05	0.06	--	0.07	0.05	0.01
Manganese (µg/L as Mn)	44	41	<2	<2	<2	<2	<2	<2	3	2	0
Nickel (µg/L as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (µg/L as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver (µg/L as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	18	0	306	310	330	351	390	424	481	359	45
Vanadium (µg/L as V)	14	0	14	15	18	21	25	29	35	22	6
Zinc (µg/L as Zn)	18	12	<5	<5	<5	<5	8	39	224	21	52
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	14	<1	<1	<1	<1	<1	1.26	1.53	1.05	0.14

**Table 81.--Construction information and summary statistics for water-quality data for Volcano Cliffs 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit; µS/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter; µg/L, micrograms per liter]

**Construction information**

Latitude: 35°10'00"	Well capacity (gal/min): 2,400	Ground elevation (ft asl): 5,345
Longitude: 106°43'45"	Cased depth (ft bls): 1,315	Static water level (ft bls): 468
Date drilled: 1980	Screened interval (ft bls): 659-1,302	Static water level date: 3/21/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field (µS/cm)	76	0	240	270	339	387	395	398	420	361	47.8
pH, field (standard units)	79	0	7.61	7.81	7.96	8.08	8.17	8.3	8.5	8.06	0.17
pH, lab (standard units)	47	0	7.8	8.08	8.12	8.2	8.24	8.34	9.4	8.21	0.21
Eh, field (mV)	42	0	78	98	114	170	207	309	730	197	122
Temperature, field (deg C)	78	0	18	23	24	24.4	24.5	24.9	26	24.1	1.1
Hardness (mg/L as CaCO <sub>3</sub> )	38	0	51	52.5	53	54	56	60	77.2	55.4	4.48
Alkalinity (mg/L as CaCO <sub>3</sub> )	79	0	110	121	122	124	127	132	148	126	5.48
Langelier saturation index (standard units)	76	0	-0.7	-0.25	-0.09	0.04	0.12	0.21	0.8	0.03	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	80	0	215	253	271	284	292	303	330	281	20.5
Calcium (mg/L as Ca)	43	0	11.9	14.2	15.1	16.1	17.1	18.8	20.4	16.2	1.72
Calcium (mg/L as CaCO <sub>3</sub> )	75	0	29.6	40	41	42.4	46.7	52.6	63.2	44.4	5.9
Magnesium (mg/L as Mg)	41	0	2.54	3.08	3.28	3.49	3.62	3.8	4.02	3.44	0.31
Sodium (mg/L as Na)	43	0	42	51.3	58.2	61.5	65.3	70.2	76	61	7.23
Potassium (mg/L as K)	41	0	4.09	4.56	5.51	5.75	5.96	6.49	7.2	5.68	0.71
Bicarbonate (mg/L as CaCO <sub>3</sub> )	80	0	107	119	120	123	126	131	147	124	5.62
Carbonate (mg/L as CaCO <sub>3</sub> )	80	5	<1	1.22	1.54	1.87	2.33	2.85	31.8	2.34	3.39
Sulfate (mg/L as SO <sub>4</sub> )	80	0	39.1	42.2	46.1	47.7	48.8	50.3	51.5	47	2.96
Chloride (mg/L as Cl)	80	2	<4	6.6	7.03	7.37	7.82	8.22	20.2	7.54	1.71
Fluoride (mg/L as F)	77	0	0.82	0.91	0.95	1	1.04	1.07	1.12	0.99	0.06
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	34	0	48.3	57.5	62.9	65.2	68.2	73.7	79.6	65.2	6.65
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	32	0	1.21	1.77	1.85	1.91	1.98	2.02	2.08	1.89	0.16
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum (µg/L as Al)	18	16	<40	<40	<40	<40	<40	47	96	43	13
Antimony (µg/L as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic (µg/L as As)	80	0	10	12	14	15	16	18	24	15	2
Barium (µg/L as Ba)	18	0	46	48	48	54	57	71	74	55	8
Beryllium (µg/L as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron (µg/L as B)	13	0	130	141	163	181	183	227	304	183	43
Cadmium (µg/L as Cd)	9	8	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium (µg/L as Cr)	9	0	5	--	6	6	7	--	8	6	1
Copper (µg/L as Cu)	18	14	<5	<5	<5	<5	<5	8	17	6	3
Iron (µg/L as Fe)	43	39	<10	<10	<10	<10	<10	<10	122	14	18
Lead (µg/L as Pb)	79	77	<2	<2	<2	<2	<2	<2	2	2	0
Lithium (mg/L as Li)	4	0	0.04	--	0.04	0.05	0.06	--	0.06	0.05	0.01
Manganese (µg/L as Mn)	43	43	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel (µg/L as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium (µg/L as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver (µg/L as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium (µg/L as Sr)	18	0	225	243	257	266	300	309	317	275	26
Vanadium (µg/L as V)	14	0	18	21	26	28	30	31	40	28	5
Zinc (µg/L as Zn)	18	11	<5	<5	<5	<5	9	23	106	13	24
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	16	<1	<1	<1	<1	<1	<1	1.04	1	0.01

**Table 82.--Construction information and summary statistics for water-quality data for Walker 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°10'27"	Well capacity (gal/min): 1,430	Ground elevation (ft asl): 5,698
Longitude: 106°31'40"	Cased depth (ft bls): 1,715	Static water level (ft bls): 853
Date drilled: 1980	Screened interval (ft bls): 982-1,703	Static water level date: 5/1/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	91	0	270	386	418	441	465	470	606	436	48.2
pH, field (standard units)	92	0	7	7.33	7.57	7.67	7.77	7.85	8.2	7.64	0.21
pH, lab (standard units)	77	0	7.14	7.55	7.8	7.88	7.94	7.99	8.07	7.83	0.18
Eh, field (mV)	76	0	13	85	117	157	206	308	617	180	102
Temperature, field (deg C)	92	0	19	25.8	26.75	26.9	27	27.1	28.5	26.6	1.3
Hardness (mg/L as $\text{CaCO}_3$ )	60	0	85	117	124	126	130	136	154	126	9.87
Alkalinity (mg/L as $\text{CaCO}_3$ )	92	0	93.3	99	101	102	104	106	145	103	5.62
Langelier saturation index (standard units)	87	0	-0.7	-0.35	-0.12	0.01	0.1	0.22	0.5	-0.03	0.21
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	92	0	165	238	254	268	280	284	334	265	23.7
Calcium (mg/L as Ca)	66	0	27.7	40.5	43.9	47	49.7	53.2	62.9	46.7	5.68
Calcium (mg/L as $\text{CaCO}_3$ )	86	0	80	107	111	117	120	124	144	116	8.57
Magnesium (mg/L as Mg)	64	0	1.12	2.06	2.21	2.36	2.48	2.62	2.88	2.32	0.3
Sodium (mg/L as Na)	66	0	16.1	33.4	36.8	38.5	40.4	42.3	56.6	38.3	4.81
Potassium (mg/L as K)	64	0	1.14	1.85	2.12	2.3	2.51	2.7	3.41	2.28	0.36
Bicarbonate (mg/L as $\text{CaCO}_3$ )	92	0	92.2	98.5	99.9	101	103	106	144	102	5.65
Carbonate (mg/L as $\text{CaCO}_3$ )	92	84	<1	<1	<1	<1	<1	<1	1.52	1.02	0.09
Sulfate (mg/L as $\text{SO}_4$ )	91	0	18.8	19.8	22.3	24.1	25.1	26	31.3	23.7	2.34
Chloride (mg/L as Cl)	92	0	8.23	47.5	52.4	56.9	61.3	62.4	106	56.3	10.4
Fluoride (mg/L as F)	90	0	0.63	0.77	0.8	0.84	0.89	0.93	1.1	0.84	0.07
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	57	0	17.2	27.3	29.4	31.5	33.2	34.1	39.9	31	3.43
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	47	4	<0.05	0.11	0.14	0.17	0.25	0.44	1.17	0.23	0.2
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	16	<40	<40	<40	<40	<40	47	98	44	14
Antimony ( $\mu\text{g/L}$ as Sb)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	93	0	4	17	19	21	22	25	40	21	5
Barium ( $\mu\text{g/L}$ as Ba)	18	0	63	74	84	89	96	118	141	92	17
Beryllium ( $\mu\text{g/L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	5	<50	<50	<50	52	70	73	90	60	13
Cadmium ( $\mu\text{g/L}$ as Cd)	9	8	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	9	8	<1	--	<1	<1	<1	--	1	1	0
Copper ( $\mu\text{g/L}$ as Cu)	18	16	<5	<5	<5	<5	<5	6	8	5	1
Iron ( $\mu\text{g/L}$ as Fe)	66	43	<10	<10	<10	<10	11	17	58	13	8
Lead ( $\mu\text{g/L}$ as Pb)	91	88	<2	<2	<2	<2	<2	<2	3	2	0
Lithium (mg/L as Li)	6	0	0.04	--	0.04	0.04	0.05	--	0.05	0.04	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	66	54	<2	<2	<2	<2	<2	2	7	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	17	17	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	10	10	<2	<2	<2	<2	<2	<2	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	234	252	287	329	342	375	406	319	43
Vanadium ( $\mu\text{g/L}$ as V)	15	13	<10	<10	<10	<10	<10	10	13	10	1
Zinc ( $\mu\text{g/L}$ as Zn)	18	10	<5	<5	<5	<5	6	10	11	6	2
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	14	<1	<1	<1	<1	<1	1.17	4.27	1.21	0.79

**Table 83.--Construction information and summary statistics for water-quality data for Walker 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°10'24"	Well capacity (gal/min): 2,380	Ground elevation (ft asl): 5,596
Longitude: 106°32'12"	Cased depth (ft bls): 1,786	Static water level (ft bls): 694
Date drilled: 1980	Screened interval (ft bls): 852-1,773	Static water level date: 4/11/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	86	0	467	550	627	631	638	642	706	623	34.9
pH, field (standard units)	87	0	7.05	7.41	7.59	7.7	7.78	7.9	8.15	7.66	0.21
pH, lab (standard units)	76	0	7.4	7.7	7.86	7.97	8.03	8.07	8.15	7.93	0.15
Eh, field (mV)	73	0	-17	76	116	145	173	254	448	156	83
Temperature, field (deg C)	86	0	22.9	28.3	28.7	28.8	29	29.8	30.4	28.7	1.1
Hardness (mg/L as $\text{CaCO}_3$ )	56	0	96.6	99	114	122	124	128	131	118	9.75
Alkalinity (mg/L as $\text{CaCO}_3$ )	85	0	128	135	137	140	143	146	205	141	8.72
Langelier saturation index (standard units)	83	0	-0.56	-0.14	-0.01	0.1	0.21	0.3	0.57	0.08	0.2
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	86	0	275	356	368	375	384	390	412	373	17.9
Calcium (mg/L as Ca)	61	0	28.5	30.2	35	39.1	41.7	43.9	48.2	38.1	5.04
Calcium (mg/L as $\text{CaCO}_3$ )	81	0	74	83.3	94	100	106	112	144	99.6	11.6
Magnesium (mg/L as Mg)	60	0	4.47	5.12	5.54	5.84	6.05	6.35	6.78	5.79	0.51
Sodium (mg/L as Na)	61	0	54.9	68.1	76.5	79.2	82.1	87.7	101	78.2	8.26
Potassium (mg/L as K)	60	0	3.49	4.31	4.8	5.14	5.29	5.64	6.51	5.02	0.56
Bicarbonate (mg/L as $\text{CaCO}_3$ )	86	0	126	133	136	139	141	145	203	140	10.1
Carbonate (mg/L as $\text{CaCO}_3$ )	86	24	<1	<1	<1	1.23	1.41	1.53	2.4	1.25	0.25
Sulfate (mg/L as $\text{SO}_4$ )	83	0	25	30.1	33.6	35.9	37.1	38.8	40.4	35.2	3.04
Chloride (mg/L as Cl)	84	0	61.9	79.2	81.6	83.7	87.3	90.2	149	85.5	10.9
Fluoride (mg/L as F)	86	0	0.94	1.16	1.18	1.24	1.31	1.38	1.5	1.25	0.1
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	53	0	31.9	34.7	38.6	41.6	43.2	46.6	50.9	41.1	4.35
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	43	42	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.49	0.06	0.07
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	16	15	<40	<40	<40	<40	<40	<40	47	40	2
Antimony ( $\mu\text{g/L}$ as Sb)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	87	0	26	30	33	36	39	42	50	36	5
Barium ( $\mu\text{g/L}$ as Ba)	16	0	57	62	69	84	90	96	97	80	13
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	172	185	192	224	255	266	266	223	34
Cadmium ( $\mu\text{g/L}$ as Cd)	8	5	<0.1	--	<0.1	<0.1	0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	7	<1	--	<1	<1	<1	--	2	1	0
Copper ( $\mu\text{g/L}$ as Cu)	16	9	<5	<5	<5	<5	8	9	12	6	2
Iron ( $\mu\text{g/L}$ as Fe)	62	8	<10	<10	12	18	26	51	89	23	17
Lead ( $\mu\text{g/L}$ as Pb)	86	78	<2	<2	<2	<2	<2	<2	5	2	0
Lithium (mg/L as Li)	4	0	0.09	--	0.1	0.12	0.13	--	0.14	0.12	0.02
Manganese ( $\mu\text{g/L}$ as Mn)	62	1	<2	14	17	21	23	26	29	20	5
Nickel ( $\mu\text{g/L}$ as Ni)	14	13	<5	<5	<5	<5	<5	<5	254	23	67
Selenium ( $\mu\text{g/L}$ as Se)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	16	0	199	212	237	266	279	292	304	257	29
Vanadium ( $\mu\text{g/L}$ as V)	13	12	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	16	10	<5	<5	<5	<5	6	8	9	6	1
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	11	<1	<1	<1	<1	1.01	1.52	1.7	1.12	0.24

**Table 84.--Construction information and summary statistics for water-quality data for Webster 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°10'31"	Well capacity (gal/min): 2,980	Ground elevation (ft asl): 5,436
Longitude: 106°33'16"	Cased depth (ft bls): 1,357	Static water level (ft bls): 536.94
Date drilled: 1977	Screened interval (ft bls): 620-1,345	Static water level date: 2/9/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	116	0	251	337	426	453	465	500	593	440	60.8
pH, field (standard units)	121	0	6.92	7.45	7.67	7.79	7.9	8.01	8.2	7.76	0.22
pH, lab (standard units)	81	0	7.35	7.8	7.9	7.95	8.01	8.08	8.28	7.94	0.15
Eh, field (mV)	74	0	49	108	152	174	212	360	726	207	119
Temperature, field (deg C)	121	0	16	21	22	22.2	22.4	22.8	29.4	22.1	1.2
Hardness (mg/L as $\text{CaCO}_3$ )	63	0	89.1	91.8	92.3	94	97.4	100	116	95.7	5.11
Alkalinity (mg/L as $\text{CaCO}_3$ )	119	0	101	124	126	128	131	135	142	128	5.45
Langelier saturation index (standard units)	117	0	-0.75	-0.37	-0.16	-0.05	0.06	0.21	0.8	-0.05	0.23
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	120	0	255	274	289	300	308	322	372	299	19.7
Calcium (mg/L as Ca)	68	0	21.6	25.7	27.4	28.7	30.5	34	38.2	29.2	3.05
Calcium (mg/L as $\text{CaCO}_3$ )	116	0	50.1	70.9	73.8	77.2	81.3	94	106	79	8.79
Magnesium (mg/L as Mg)	66	0	3.46	4.88	5.19	5.36	5.56	5.92	6.63	5.36	0.47
Sodium (mg/L as Na)	68	0	37.7	47.9	53.9	56.6	61.9	67.5	77.9	57.8	7.28
Potassium (mg/L as K)	66	0	2.83	4.41	4.61	4.82	5.12	5.3	5.88	4.82	0.48
Bicarbonate (mg/L as $\text{CaCO}_3$ )	120	0	90.2	122	124	126	130	134	141	127	6.27
Carbonate (mg/L as $\text{CaCO}_3$ )	120	37	<1	<1	<1	1.16	1.44	1.92	16	1.48	1.63
Sulfate (mg/L as $\text{SO}_4$ )	119	0	25.2	30.6	35.5	37.1	37.9	39	43.4	36.4	2.92
Chloride (mg/L as Cl)	120	0	30.6	36.3	38.1	40.1	43.6	52.4	83	42.5	7.96
Fluoride (mg/L as F)	116	0	0.66	0.8	0.82	0.86	0.9	0.95	1.21	0.87	0.07
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	60	0	38.8	47.8	52.7	55.2	57.8	59.6	63.9	54.6	4.71
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.05	0.05	0
Nitrate (mg/L as N)	50	7	<0.05	<0.05	0.13	0.19	0.25	0.43	1.07	0.22	0.17
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	16	14	<40	<40	<40	<40	<40	42	103	44	16
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	122	0	17	31	33	35	37	39	47	35	4
Barium ( $\mu\text{g}/\text{L}$ as Ba)	16	0	65	68	72	78	83	98	119	80	13
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	0	119	127	162	170	175	200	208	167	25
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	0	2	--	2	3	3	--	3	3	0
Copper ( $\mu\text{g}/\text{L}$ as Cu)	16	14	<5	<5	<5	<5	<5	7	18	6	3
Iron ( $\mu\text{g}/\text{L}$ as Fe)	69	60	<10	<10	<10	<10	<10	11	777	22	92
Lead ( $\mu\text{g}/\text{L}$ as Pb)	120	104	<2	<2	<2	<2	<2	3	30	3	4
Lithium (mg/L as Li)	4	0	0.11	--	0.13	0.15	0.18	--	0.2	0.15	0.04
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	69	66	<2	<2	<2	<2	<2	<2	5	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	14	12	<5	<5	<5	<5	<5	10	26	7	6
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	16	0	243	259	286	302	319	360	406	306	38
Vanadium ( $\mu\text{g}/\text{L}$ as V)	12	1	<10	11	18	20	22	25	36	20	7
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	16	12	<5	<5	<5	<5	6	17	31	8	7
<b>Carbon</b>											
Total organic carbon (mg/L as C)	15	10	<1	<1	<1	<1	1.33	7.07	8.47	1.99	2.37

**Table 85.--Construction information and summary statistics for water-quality data for Webster 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu$ S/cm, microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu$ g/L, micrograms per liter]

**Construction information**

Latitude: 35°10'12"	Well capacity (gal/min): 3,170	Ground elevation (ft asl): 5,387
Longitude: 106°33'35"	Cased depth (ft bls): 1,346	Static water level (ft bls): 490
Date drilled: 1977	Screened interval (ft bls): 608-1,334	Static water level date: 12/14/95

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu$ S/cm)	120	0	250	315	366	412	424	443	471	394	50.5
pH, field (standard units)	122	0	6.96	7.47	7.67	7.8	7.9	8	8.5	7.77	0.23
pH, lab (standard units)	86	0	7.15	7.72	7.88	7.98	8.05	8.09	8.26	7.94	0.18
Eh, field (mV)	82	0	31	117	165	193	242	412	758	235	134
Temperature, field (deg C)	123	0	17	21	21.1	21.2	21.5	22	29.8	21.4	1
Hardness (mg/L as CaCO <sub>3</sub> )	65	0	84	100	102	104	108	112	128	105	6.65
Alkalinity (mg/L as CaCO <sub>3</sub> )	122	0	113	127	129	131	133	137	164	132	6.05
Langelier saturation index (standard units)	118	0	-0.9	-0.35	-0.15	0	0.1	0.26	0.8	-0.03	0.27
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	123	0	235	264	276	285	296	304	375	285	20.1
Calcium (mg/L as Ca)	69	0	22.9	27.2	28.9	30	31.5	33.8	36.6	30.1	2.46
Calcium (mg/L as CaCO <sub>3</sub> )	117	0	42	74	76	80	86.5	94.2	131	82	10.6
Magnesium (mg/L as Mg)	67	0	4.86	6.75	7.02	7.36	7.64	8.02	8.71	7.34	0.58
Sodium (mg/L as Na)	70	0	15.5	39	42.1	44.1	46.9	50.6	56.7	44.1	5.89
Potassium (mg/L as K)	68	0	2.07	5.68	6.05	6.28	6.6	6.99	7.79	6.21	0.77
Bicarbonate (mg/L as CaCO <sub>3</sub> )	123	0	111	126	128	130	132	137	164	131	6.44
Carbonate (mg/L as CaCO <sub>3</sub> )	123	33	<1	<1	<1	1.22	1.52	1.95	3.13	1.36	0.44
Sulfate (mg/L as SO <sub>4</sub> )	120	0	27.7	34.8	37.5	38.6	39.5	40.7	48.9	38.2	3.07
Chloride (mg/L as Cl)	123	1	<4	22.1	23.5	25.2	28.2	32.2	51.4	26.3	6.44
Fluoride (mg/L as F)	117	0	0.64	0.69	0.72	0.75	0.78	0.82	0.92	0.75	0.05
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as SiO <sub>2</sub> )	61	0	23.1	56.1	59.3	61.8	65.3	68.3	73.5	61.2	7.59
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	52	28	<0.05	<0.05	<0.05	<0.05	0.11	0.24	0.46	0.11	0.11
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu$ g/L as Al)	17	16	<40	<40	<40	<40	<40	<40	92	43	13
Antimony ( $\mu$ g/L as Sb)	9	8	<2	--	<2	<2	<2	--	2	2	0
Arsenic ( $\mu$ g/L as As)	124	0	19	24	25	27	28	30	37	27	3
Barium ( $\mu$ g/L as Ba)	17	0	67	69	76	79	83	122	199	87	31
Beryllium ( $\mu$ g/L as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu$ g/L as B)	12	0	87	105	123	144	154	167	184	139	27
Cadmium ( $\mu$ g/L as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu$ g/L as Cr)	8	0	1	--	1	2	2	--	2	1	0
Copper ( $\mu$ g/L as Cu)	17	12	<5	<5	<5	<5	13	48	209	22	49
Iron ( $\mu$ g/L as Fe)	71	60	<10	<10	<10	<10	<10	13	641	22	76
Lead ( $\mu$ g/L as Pb)	123	106	<2	<2	<2	<2	<2	3	64	3	6
Lithium (mg/L as Li)	4	0	0.12	--	0.13	0.14	0.14	--	0.14	0.14	0.01
Manganese ( $\mu$ g/L as Mn)	71	69	<2	<2	<2	<2	<2	<2	3	2	0
Nickel ( $\mu$ g/L as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu$ g/L as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu$ g/L as Ag)	7	7	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu$ g/L as Sr)	17	0	277	284	304	312	337	387	389	325	36
Vanadium ( $\mu$ g/L as V)	13	0	10	12	14	17	19	21	23	16	4
Zinc ( $\mu$ g/L as Zn)	17	8	<5	<5	<5	6	9	19	90	12	20
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	11	<1	<1	<1	<1	1.32	4.05	4.45	1.49	1.1

**Table 86.--Construction Information and summary statistics for water-quality data for West Mesa 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction Information**

Latitude: 35°04'28"	Well capacity (gal/min): 360	Ground elevation (ft asl): 5,175
Longitude: 106°44'18"	Cased depth (ft bls): 1,176	Static water level (ft bls): 299
Date drilled: 1958	Screened interval (ft bls): 504-1,176	Static water level date: 3/30/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	114	0	110	380	424	501	527	540	630	474	74.5
pH, field (standard units)	116	0	8.13	8.6	8.82	8.99	9.1	9.2	9.54	8.95	0.25
pH, lab (standard units)	78	0	7.71	8.87	8.94	9.04	9.13	9.18	9.22	9.01	0.21
Eh, field (mV)	74	0	34	96	122	165	192	327	606	192	120
Temperature, field (deg C)	115	0	18	27.1	28.3	29.5	30.8	31.3	33	29.2	2.1
Hardness (mg/L as $\text{CaCO}_3$ )	61	0	4	6	7	9	12	13	19.9	9.54	3.27
Alkalinity (mg/L as $\text{CaCO}_3$ )	116	0	125	153	157	159	163	172	180	160	8.49
Langelier saturation index (standard units)	111	0	-0.62	0.01	0.15	0.37	0.5	0.59	1.06	0.31	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	115	0	244	304	320	336	353	372	435	338	29.3
Calcium (mg/L as Ca)	67	0	1.47	1.56	1.68	1.92	2.31	2.85	5.14	2.07	0.58
Calcium (mg/L as $\text{CaCO}_3$ )	109	0	3.52	5	6	8	9.93	12	25.2	8.12	3.12
Magnesium (mg/L as Mg)	65	3	<0.05	0.08	0.09	0.1	0.13	0.15	0.89	0.12	0.1
Sodium (mg/L as Na)	67	0	56.4	91.3	101	108	114	119	138	106	12.8
Potassium (mg/L as K)	64	60	<1	<1	<1	<1	<1	<1	1.65	1.02	0.09
Bicarbonate (mg/L as $\text{CaCO}_3$ )	115	0	106	137	139	144	151	162	170	146	10.3
Carbonate (mg/L as $\text{CaCO}_3$ )	116	2	<1	6.12	10.6	13.5	17.2	19.4	24.8	13.4	5.02
Sulfate (mg/L as $\text{SO}_4$ )	113	0	49	63.5	65.4	67.9	83.8	87.1	94.8	72.7	10.5
Chloride (mg/L as Cl)	116	1	<4	5.7	5.93	6.32	6.85	7.76	16.4	6.69	1.63
Fluoride (mg/L as F)	110	0	0.86	1	1.04	1.1	1.29	1.36	1.48	1.16	0.15
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	58	0	26.9	28.3	32.9	36.2	40.1	43.5	47.6	36.3	5.01
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	47	0	0.55	0.82	1.41	1.71	1.77	1.83	2.72	1.55	0.41
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	118	0	16	22	24	27	30	34	43	28	5
Barium ( $\mu\text{g/L}$ as Ba)	17	0	13	14	15	23	26	30	31	21	6
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	200	213	253	282	322	333	388	286	54
Cadmium ( $\mu\text{g/L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	3	--	6	11	12	--	12	9	4
Copper ( $\mu\text{g/L}$ as Cu)	17	15	<5	<5	<5	<5	<5	5	8	5	1
Iron ( $\mu\text{g/L}$ as Fe)	67	54	<10	<10	<10	<10	<10	12	17	11	2
Lead ( $\mu\text{g/L}$ as Pb)	116	110	<2	<2	<2	<2	<2	<2	58	3	5
Lithium (mg/L as Li)	4	0	0.04	--	0.04	0.04	0.04	--	0.04	0.04	0
Manganese ( $\mu\text{g/L}$ as Mn)	67	61	<2	<2	<2	<2	<2	<2	6	2	1
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	5	2	1
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	34	40	54	59	68	71	73	58	11
Vanadium ( $\mu\text{g/L}$ as V)	13	0	33	35	39	49	76	96	114	62	27
Zinc ( $\mu\text{g/L}$ as Zn)	17	11	<5	<5	<5	<5	10	27	54	11	13
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	12	<1	<1	<1	<1	1.2	1.48	1.68	1.13	0.23

**Table 87.--Construction information and summary statistics for water-quality data for West Mesa 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°05'08"	Well capacity (gal/min): 1,840	Ground elevation (ft asl): 5,165
Longitude: 106°43'56"	Cased depth (ft bls): 1,402	Static water level (ft bls): 279
Date drilled: 1962	Screened interval (ft bls): 394-1,402	Static water level date: 4/8/93

**Summary statistics (data from 1988 to 1993)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	56	0	241	300	350	444	450	456	529	407	70.1
pH, field (standard units)	56	0	8.03	8.17	8.46	8.6	8.74	8.94	9.59	8.6	0.28
pH, lab (standard units)	25	0	8.2	8.53	8.61	8.66	8.7	8.8	9.12	8.66	0.16
Eh, field (mV)	22	0	67	118	145	160	201	230	449	185	94
Temperature, field (deg C)	56	0	22	24	24.9	25	25.2	26	28.5	25	0.9
Hardness (mg/L as $\text{CaCO}_3$ )	14	0	6.06	14	16.1	17.6	19.8	21	22	17.3	3.94
Alkalinity (mg/L as $\text{CaCO}_3$ )	54	0	117	147	148	151	153	166	169	152	8.66
Langelier saturation index (standard units)	53	0	-0.6	-0.2	0	0.19	0.3	0.46	0.74	0.15	0.28
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	56	0	240	265	281	295	308	324	364	295	23.1
Calcium (mg/L as Ca)	17	0	2.04	3.92	4.33	5.12	5.5	6.45	6.52	4.95	1.05
Calcium (mg/L as $\text{CaCO}_3$ )	53	0	6.04	10.2	12.4	14	16	18.2	31.2	14.6	3.83
Magnesium (mg/L as Mg)	15	0	0.11	0.68	0.73	0.84	0.91	0.96	1.13	0.8	0.22
Sodium (mg/L as Na)	17	0	47.6	74.9	80.7	91.9	98.2	111	118	89.6	16.3
Potassium (mg/L as K)	15	3	<1	<1	1.27	1.46	1.6	1.67	2.01	1.43	0.28
Bicarbonate (mg/L as $\text{CaCO}_3$ )	56	0	116	139	142	144	149	163	166	147	9.3
Carbonate (mg/L as $\text{CaCO}_3$ )	56	2	<1	2.62	4.73	6.1	6.86	8.26	16.2	5.84	2.45
Sulfate (mg/L as $\text{SO}_4$ )	53	0	39.6	40.5	47.9	49.4	50.8	52.5	68.7	48.9	6.02
Chloride (mg/L as Cl)	56	1	<4	6.45	6.79	7.27	8.3	8.77	10.8	7.48	1.11
Fluoride (mg/L as F)	52	0	1.01	1.2	1.28	1.33	1.38	1.45	1.73	1.33	0.12
Bromide (mg/L as Br)	--	--	--	--	--	--	--	--	--	--	--
Silica (mg/L as $\text{SiO}_2$ )	9	0	27.6	--	30.8	32.4	32.7	--	38.6	32.1	3.21
<b>Nutrients</b>											
Nitrite (mg/L as N)	--	--	--	--	--	--	--	--	--	--	--
Nitrate (mg/L as N)	--	--	--	--	--	--	--	--	--	--	--
Orthophosphate (mg/L as P)	--	--	--	--	--	--	--	--	--	--	--
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	8	7	<40	--	<40	<40	<40	--	144	53	37
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	1	1	<2	--	--	<2	--	--	<2	<2	--
Arsenic ( $\mu\text{g}/\text{L}$ as As)	58	0	21	35	37	40	41	43	45	39	4
Barium ( $\mu\text{g}/\text{L}$ as Ba)	8	0	15	--	18	22	27	--	47	25	10
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	--	--	--	--	--	--	--	--	--	--	--
Boron ( $\mu\text{g}/\text{L}$ as B)	4	0	179	--	199	229	253	--	267	226	37
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	--	--	--	--	--	--	--	--	--	--	--
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	--	--	--	--	--	--	--	--	--	--	--
Copper ( $\mu\text{g}/\text{L}$ as Cu)	8	5	<5	--	<5	<5	8	--	39	10	12
Iron ( $\mu\text{g}/\text{L}$ as Fe)	18	13	<10	<10	<10	<10	11	38	45	14	10
Lead ( $\mu\text{g}/\text{L}$ as Pb)	56	46	<2	<2	<2	<2	<2	4	10	3	2
Lithium (mg/L as Li)	3	0	0.03	--	--	0.04	--	--	0.04	0.04	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	18	17	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	6	6	<5	--	<5	<5	<5	--	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	1	1	<2	--	--	<2	--	--	<2	<2	--
Silver ( $\mu\text{g}/\text{L}$ as Ag)	6	6	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	8	0	43	--	52	79	87	--	97	72	20
Vanadium ( $\mu\text{g}/\text{L}$ as V)	4	0	54	--	56	60	73	--	82	64	13
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	8	5	<5	--	<5	<5	15	--	26	10	9
<b>Carbon</b>											
Total organic carbon (mg/L as C)	7	7	<1	--	<1	<1	<1	--	<1	<1	0

**Table 88.--Construction information and summary statistics for water-quality data for West Mesa 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'44"	Well capacity (gal/min): 2,730	Ground elevation (ft asl): 5,145
Longitude: 106°43'54"	Cased depth (ft bls): 1,365	Static water level (ft bls): 253.46
Date drilled: 1974	Screened interval (ft bls): 405-1,353	Static water level date: 4/14/97

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	111	0	235	350	400	458	466	475	535	434	56.9
pH, field (standard units)	111	0	7.9	8.34	8.55	8.7	8.79	8.87	9.52	8.65	0.23
pH, lab (standard units)	77	0	8.16	8.59	8.68	8.73	8.79	8.87	9.19	8.72	0.15
Eh, field (mV)	72	0	53	93	127	168	198	340	651	196	131
Temperature, field (deg C)	111	0	19.9	24.1	25	25.2	26	28.1	29.4	25.6	1.6
Hardness (mg/L as $\text{CaCO}_3$ )	58	0	10	10	12	13	14.1	18.9	23.2	13.5	2.91
Alkalinity (mg/L as $\text{CaCO}_3$ )	108	0	144	150	152	154	157	162	174	155	5.69
Langelier saturation index (standard units)	105	0	-0.7	-0.18	0.01	0.15	0.26	0.38	0.8	0.12	0.24
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	110	0	230	278	295	308	320	328	389	306	23.2
Calcium (mg/L as Ca)	63	0	2.81	3.2	3.49	3.89	4.16	4.37	5.72	3.86	0.54
Calcium (mg/L as $\text{CaCO}_3$ )	105	0	6	9.4	10	11.1	12.5	14	16.3	11.3	1.81
Magnesium (mg/L as Mg)	61	0	0.29	0.34	0.36	0.44	0.49	0.51	0.57	0.43	0.07
Sodium (mg/L as Na)	62	0	65.5	88.6	92.7	97.5	102	112	119	98.4	9.7
Potassium (mg/L as K)	60	10	<1	<1	1.05	1.2	1.31	1.46	2	1.21	0.19
Bicarbonate (mg/L as $\text{CaCO}_3$ )	109	0	135	141	144	147	150	157	172	148	6.86
Carbonate (mg/L as $\text{CaCO}_3$ )	109	0	1.19	4.65	6.36	7.47	8.49	9.75	20.2	7.29	2.36
Sulfate (mg/L as $\text{SO}_4$ )	111	0	39.9	47.4	49.2	50.4	52	60.6	80.9	51.8	6.56
Chloride (mg/L as Cl)	111	0	4.22	7.51	7.88	8.32	8.65	9.46	18.4	8.48	1.55
Fluoride (mg/L as F)	106	0	0.83	1.26	1.37	1.45	1.5	1.53	1.67	1.41	0.13
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	53	0	22.9	26.6	28.2	29.4	30.7	33	35.5	29.5	2.64
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	44	0	1.6	2.06	2.19	2.23	2.29	2.39	2.68	2.23	0.17
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	18	16	<40	<40	<40	<40	<40	70	130	47	22
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	112	0	28	35	38	40	44	46	52	41	4
Barium ( $\mu\text{g}/\text{L}$ as Ba)	18	0	15	15	17	19	21	31	47	21	7
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	0	232	233	246	262	282	314	337	269	32
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	0	6	--	6	7	8	--	11	7	2
Copper ( $\mu\text{g}/\text{L}$ as Cu)	18	14	<5	<5	<5	<5	<5	27	28	9	8
Iron ( $\mu\text{g}/\text{L}$ as Fe)	64	49	<10	<10	<10	<10	<10	37	102	17	18
Lead ( $\mu\text{g}/\text{L}$ as Pb)	110	99	<2	<2	<2	<2	<2	<2	13	2	1
Lithium (mg/L as Li)	5	0	0.02	--	0.03	0.03	0.04	--	0.04	0.03	0.01
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	64	58	<2	<2	<2	<2	<2	<2	5	2	1
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	18	0	49	50	55	61	65	75	84	61	9
Vanadium ( $\mu\text{g}/\text{L}$ as V)	14	0	61	63	66	70	74	77	88	71	7
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	18	11	<5	<5	<5	<5	9	34	134	15	31
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	14	<1	<1	<1	<1	<1	1.29	1.36	1.05	0.11

**Table 89.--Construction information and summary statistics for water-quality data for West Mesa 4**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'49"	Well capacity (gal/min): 2,340	Ground elevation (ft asl): 5,105
Longitude: 106°43'20"	Cased depth (ft bls): 1,287	Static water level (ft bls): 226
Date drilled: 1975	Screened interval (ft bls): 387-1,275	Static water level date: 3/30/96

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	113	0	245	401	472	486	554	565	650	494	69.4
pH, field (standard units)	115	0	7.77	8.38	8.6	8.88	9.07	9.14	9.4	8.82	0.32
pH, lab (standard units)	79	0	8.21	8.55	8.66	8.98	9.08	9.15	9.2	8.88	0.25
Eh, field (mV)	74	0	16	97	122	159	185	354	662	193	135
Temperature, field (deg C)	114	0	17	24.8	25	29.8	31.8	31.9	34	28.4	3.5
Hardness (mg/L as $\text{CaCO}_3$ )	63	0	8	9.85	11.1	13	17.3	20	27	14.1	4.48
Alkalinity (mg/L as $\text{CaCO}_3$ )	113	0	130	134	136	143	150	160	183	144	10.3
Langelier saturation index (standard units)	110	0	-0.6	0.01	0.22	0.4	0.54	0.7	1.3	0.37	0.3
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	112	0	256	302	320	337	364	374	406	338	29.6
Calcium (mg/L as Ca)	67	0	2.4	2.89	3.01	3.26	4.44	6.84	8.28	4	1.46
Calcium (mg/L as $\text{CaCO}_3$ )	108	0	5.99	8	9.16	12	18	20.4	25.1	13.5	5.03
Magnesium (mg/L as Mg)	65	0	0.2	0.22	0.25	0.27	0.4	0.77	0.91	0.37	0.2
Sodium (mg/L as Na)	67	0	50.4	93.3	101	112	118	124	166	110	14.9
Potassium (mg/L as K)	65	46	<1	<1	<1	<1	1.04	1.48	1.98	1.11	0.23
Bicarbonate (mg/L as $\text{CaCO}_3$ )	114	0	114	119	122	130	144	154	181	134	14
Carbonate (mg/L as $\text{CaCO}_3$ )	113	1	<1	4.58	5.24	9.68	13.9	15.5	17.8	9.68	4.58
Sulfate (mg/L as $\text{SO}_4$ )	112	0	48.9	61.2	62.8	87	91.8	93.9	103	78.2	15.6
Chloride (mg/L as Cl)	113	0	5.14	10.8	11.3	14.8	16.2	17	17.8	13.9	2.68
Fluoride (mg/L as F)	109	0	0.83	0.94	1	1.08	1.4	1.46	1.64	1.18	0.21
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	58	0	28	29.4	33.2	35.8	37.8	40.2	43.1	35.4	3.67
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	48	0	1.45	1.56	1.66	1.71	1.78	1.85	1.99	1.71	0.11
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	117	0	21	26	28	36	40	44	53	35	7
Barium ( $\mu\text{g/L}$ as Ba)	17	0	10	10	14	21	28	32	35	20	8
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	210	216	244	262	278	294	387	267	46
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	6	--	8	17	18	--	28	15	7
Copper ( $\mu\text{g/L}$ as Cu)	17	12	<5	<5	<5	<5	6	14	16	7	3
Iron ( $\mu\text{g/L}$ as Fe)	68	58	<10	<10	<10	<10	<10	14	47	12	7
Lead ( $\mu\text{g/L}$ as Pb)	115	106	<2	<2	<2	<2	<2	<2	19	2	2
Lithium (mg/L as Li)	4	0	0.03	--	0.04	0.04	0.04	--	0.04	0.04	0
Manganese ( $\mu\text{g/L}$ as Mn)	68	66	<2	<2	<2	<2	<2	<2	5	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	7	<2	--	<2	<2	<2	--	4	2	1
Silver ( $\mu\text{g/L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	3	2	0
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	34	37	53	63	111	123	139	79	34
Vanadium ( $\mu\text{g/L}$ as V)	13	0	46	49	54	62	86	91	97	69	18
Zinc ( $\mu\text{g/L}$ as Zn)	17	9	<5	<5	<5	<5	9	22	23	8	6
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	10	<1	<1	<1	<1	1.33	2.07	2.73	1.29	0.52

**Table 90.--Construction information and summary statistics for water-quality data for Yale 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'25"	Well capacity (gal/min): 2,390	Ground elevation (ft asl): 5,159
Longitude: 106°37'26"	Cased depth (ft bls): 960	Static water level (ft bls): 278
Date drilled: 1963	Screened interval (ft bls): 336-960	Static water level date: 2/23/94

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	32	0	240	300	330	368	378	385	393	350	42
pH, field (standard units)	32	0	7.16	7.31	7.59	7.79	7.9	8	8.1	7.73	0.25
pH, lab (standard units)	19	0	7.14	7.18	7.7	7.93	8.03	8.11	8.11	7.83	0.28
Eh, field (mV)	17	0	123	124	149	169	194	544	691	228	160
Temperature, field (deg C)	32	0	19	21	21.2	21.3	21.4	22	24	21.3	0.8
Hardness (mg/L as $\text{CaCO}_3$ )	18	0	115	117	120	122	123	130	137	122	5.19
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	102	104	106	107	111	118	178	111	13.8
Langelier saturation index (standard units)	30	0	-0.6	-0.53	-0.25	0.03	0.17	0.2	0.3	-0.06	0.27
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	33	0	198	232	250	256	264	280	288	257	17.7
Calcium (mg/L as Ca)	22	0	28.6	32.7	35.7	38.3	40.5	41.4	44.8	37.8	3.98
Calcium (mg/L as $\text{CaCO}_3$ )	30	0	86	90	91.3	96.4	104	115	119	98.5	9.13
Magnesium (mg/L as Mg)	20	0	5.62	6.14	6.78	7.04	7.67	8.21	8.68	7.18	0.78
Sodium (mg/L as Na)	22	0	19.2	21.7	24.3	26	28	29.3	33	26.1	3.31
Potassium (mg/L as K)	20	0	3.74	4.13	4.55	5.04	5.47	6	6.83	5.04	0.75
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	101	102	104	106	110	118	176	110	13.8
Carbonate (mg/L as $\text{CaCO}_3$ )	34	21	<1	<1	<1	<1	1.33	1.64	2.51	1.22	0.38
Sulfate (mg/L as $\text{SO}_4$ )	33	0	31.8	32.3	37.4	38.1	41.9	45.9	50.2	39	4.57
Chloride (mg/L as Cl)	34	0	12.2	18.7	19.4	20.9	21.8	22.6	24.5	20.5	2.2
Fluoride (mg/L as F)	32	0	0.38	0.48	0.5	0.54	0.57	0.63	0.92	0.55	0.09
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	12	0	42.7	52.1	52.7	57.4	60.6	61.7	69	56.7	6.57
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	7	<0.05	--	<0.05	<0.05	<0.05	--	0.17	0.07	0.04
Nitrate (mg/L as N)	10	0	0.46	0.47	0.49	0.54	0.56	0.59	0.62	0.53	0.05
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	18	17	<40	<40	<40	<40	<40	<40	97	43	13
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	35	0	4	6	7	7	8	9	12	7	2
Barium ( $\mu\text{g/L}$ as Ba)	18	0	66	80	91	104	121	132	171	106	23
Beryllium ( $\mu\text{g/L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g/L}$ as B)	13	1	<50	56	67	93	119	129	134	92	30
Cadmium ( $\mu\text{g/L}$ as Cd)	8	7	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	4	<1	--	<1	1	2	--	2	1	1
Copper ( $\mu\text{g/L}$ as Cu)	18	14	<5	<5	<5	<5	<5	16	32	7	7
Iron ( $\mu\text{g/L}$ as Fe)	22	16	<10	<10	<10	<10	14	19	23	12	4
Lead ( $\mu\text{g/L}$ as Pb)	34	30	<2	<2	<2	<2	<2	2	17	3	3
Lithium (mg/L as Li)	5	0	0.03	--	0.04	0.04	0.04	--	0.04	0.04	0
Manganese ( $\mu\text{g/L}$ as Mn)	22	21	<2	<2	<2	<2	<2	<2	2	2	0
Nickel ( $\mu\text{g/L}$ as Ni)	16	16	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	8	8	<2	--	<2	<2	<2	--	<2	<2	0
Strontium ( $\mu\text{g/L}$ as Sr)	18	0	239	267	316	332	368	407	441	335	52
Vanadium ( $\mu\text{g/L}$ as V)	14	13	<10	<10	<10	<10	<10	<10	10	10	0
Zinc ( $\mu\text{g/L}$ as Zn)	18	11	<5	<5	<5	<5	6	23	60	9	13
<b>Carbon</b>											
Total organic carbon (mg/L as C)	17	16	<1	<1	<1	<1	<1	<1	1.16	1.01	0.04

**Table 91.--Construction information and summary statistics for water-quality data for Yale 2**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°03'58"	Well capacity (gal/min): 3,120	Ground elevation (ft asl): 5,128
Longitude: 106°37'29"	Cased depth (ft bls): 1,191	Static water level (ft bls): 249.95
Date drilled: 1973	Screened interval (ft bls): 351-1,179	Static water level date: 1/26/98

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	35	0	230	300	408	420	433	437	448	398	55.6
pH, field (standard units)	35	0	7.22	7.48	7.59	7.7	7.91	8.1	8.26	7.73	0.24
pH, lab (standard units)	20	0	7.09	7.5	7.87	7.97	8.02	8.1	8.2	7.89	0.26
Eh, field (mV)	19	0	58	102	125	174	214	489	731	207	156
Temperature, field (deg C)	35	0	20.6	20.8	22.7	23.1	23.2	23.4	26	22.9	1
Hardness (mg/L as $\text{CaCO}_3$ )	19	0	109	112	122	124	130	134	138	125	6.85
Alkalinity (mg/L as $\text{CaCO}_3$ )	34	0	83.6	103	105	108	111	113	124	108	6.33
Langelier saturation index (standard units)	31	0	-0.57	-0.3	-0.21	-0.1	0.11	0.3	0.5	-0.05	0.26
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	35	0	232	260	272	292	304	308	312	287	19.8
Calcium (mg/L as Ca)	23	0	31.9	33.1	35.6	37.1	40.6	43.2	51.5	38.2	4.27
Calcium (mg/L as $\text{CaCO}_3$ )	32	0	83.3	89.4	90.9	95.8	98.4	105	117	96.3	7.55
Magnesium (mg/L as Mg)	21	0	6.49	6.74	7.49	8.02	8.51	8.81	10.1	8	0.9
Sodium (mg/L as Na)	23	0	25.6	28.8	30.4	33.1	35.8	41.4	43.9	33.3	4.61
Potassium (mg/L as K)	21	0	5.42	5.7	6.09	6.9	7.28	7.58	8.74	6.79	0.85
Bicarbonate (mg/L as $\text{CaCO}_3$ )	35	0	83.4	102	104	107	110	117	118	107	6.26
Carbonate (mg/L as $\text{CaCO}_3$ )	35	19	<1	<1	<1	<1	1.16	1.51	1.56	1.12	0.19
Sulfate (mg/L as $\text{SO}_4$ )	36	0	32.8	34.8	38	40.1	44.1	46.8	51.5	41	4.65
Chloride (mg/L as Cl)	36	1	<4	31.4	33.4	34.8	35.7	36.6	39.8	33.3	6.14
Fluoride (mg/L as F)	35	0	0.52	0.54	0.56	0.6	0.66	0.7	0.82	0.61	0.07
Bromide (mg/L as Br)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	14	0	58.1	58.7	61.1	66.5	69.7	71.9	76.9	66.2	5.4
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	12	0	0.36	0.44	0.45	0.46	0.48	0.51	0.51	0.46	0.04
Orthophosphate (mg/L as P)	7	7	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	17	17	<40	<40	<40	<40	<40	<40	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	36	0	7	9	10	11	11	12	13	11	1
Barium ( $\mu\text{g}/\text{L}$ as Ba)	17	0	85	86	92	102	109	120	158	104	18
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	8	8	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	12	1	<50	82	92	115	146	166	176	117	37
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	8	8	<0.1	--	<0.1	<0.1	<0.1	--	<0.1	<0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	8	0	2	--	2	3	4	--	5	3	1
Copper ( $\mu\text{g}/\text{L}$ as Cu)	17	15	<5	<5	<5	<5	<5	5	7	5	0
Iron ( $\mu\text{g}/\text{L}$ as Fe)	23	22	<10	<10	<10	<10	<10	<10	12	10	0
Lead ( $\mu\text{g}/\text{L}$ as Pb)	34	31	<2	<2	<2	<2	<2	<2	5	2	1
Lithium (mg/L as Li)	4	0	0.06	--	0.06	0.06	0.06	--	0.06	0.06	0
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	23	23	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	7	3	2
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	17	0	303	312	333	382	415	458	459	379	51
Vanadium ( $\mu\text{g}/\text{L}$ as V)	13	8	<10	<10	<10	<10	11	12	13	11	1
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	17	11	<5	<5	<5	<5	6	14	22	7	5
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	16	<1	<1	<1	<1	<1	<1	<1	<1	0

**Table 92.--Construction information and summary statistics for water-quality data for Yale 3**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

**Construction information**

Latitude: 35°04'35"	Well capacity (gal/min): 2,480	Ground elevation (ft asl): 5,080
Longitude: 106°38'00"	Cased depth (ft bls): 1,004	Static water level (ft bls): 204
Date drilled: 1973	Screened interval (ft bls): 320-992	Static water level date: 4/24/89

**Summary statistics (data from 1988 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S/cm}$ )	34	0	290	381	421	471	481	491	547	452	57.1
pH, field (standard units)	34	0	7.09	7.42	7.46	7.63	7.8	8	8	7.64	0.25
pH, lab (standard units)	20	0	7.32	7.57	7.72	7.83	7.88	7.97	8.2	7.8	0.18
Eh, field (mV)	18	0	105	127	137	180	254	324	596	209	114
Temperature, field (deg C)	33	0	22	23.7	24.4	24.7	24.8	24.9	25	24.5	0.7
Hardness (mg/L as $\text{CaCO}_3$ )	19	0	137	140	143	144	146	150	156	145	4.02
Alkalinity (mg/L as $\text{CaCO}_3$ )	33	0	103	114	120	123	127	129	136	123	6.35
Langelier saturation index (standard units)	28	0	-0.55	-0.43	-0.19	-0.06	0.15	0.4	0.7	-0.02	0.29
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	32	0	238	310	327	343	352	360	375	336	26.1
Calcium (mg/L as Ca)	23	0	37.2	40.4	42.5	44.3	45.4	49.2	56.6	44.4	3.94
Calcium (mg/L as $\text{CaCO}_3$ )	29	0	80	100	108	110	117	136	137	112	12.6
Magnesium (mg/L as Mg)	21	0	7.3	7.88	8.47	9.19	9.72	10.1	11.1	9.11	0.99
Sodium (mg/L as Na)	23	0	27.6	33.1	33.5	38.6	41.5	47.3	61.8	39.1	7.11
Potassium (mg/L as K)	21	0	6.02	6.58	7.51	7.78	8.3	8.78	9.52	7.77	0.83
Bicarbonate (mg/L as $\text{CaCO}_3$ )	34	0	102	113	119	123	126	128	135	122	6.43
Carbonate (mg/L as $\text{CaCO}_3$ )	34	24	<1	<1	<1	<1	1.15	1.33	1.72	1.09	0.19
Sulfate (mg/L as $\text{SO}_4$ )	32	0	52.7	55.7	64.4	67.1	69.4	71.6	73.8	65.9	5.18
Chloride (mg/L as Cl)	33	1	<4	27.6	28.7	29.5	32.8	33.4	60.3	30.9	7.94
Fluoride (mg/L as F)	33	0	0.46	0.49	0.51	0.54	0.59	0.63	0.68	0.56	0.06
Bromide (mg/L as Br)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	14	0	58.4	60.2	66.1	73.2	78.3	79.3	81.2	71.9	7.29
<b>Nutrients</b>											
Nitrite (mg/L as N)	8	8	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	12	0	0.51	0.51	0.53	0.56	0.57	0.59	0.59	0.55	0.03
Orthophosphate (mg/L as P)	8	8	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g/L}$ as Al)	17	16	<40	<40	<40	<40	<40	<40	63	41	6
Antimony ( $\mu\text{g/L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g/L}$ as As)	35	0	5	10	12	13	14	15	17	13	2
Barium ( $\mu\text{g/L}$ as Ba)	17	0	53	74	84	89	92	97	156	90	20
Beryllium ( $\mu\text{g/L}$ as Be)	8	7	<1	--	<1	<1	<1	--	1	1	0
Boron ( $\mu\text{g/L}$ as B)	12	0	91	108	122	170	177	182	209	154	36
Cadmium ( $\mu\text{g/L}$ as Cd)	8	6	<0.1	--	<0.1	<0.1	<0.1	--	0.1	0.1	0
Chromium ( $\mu\text{g/L}$ as Cr)	8	0	3	--	4	4	4	--	7	4	1
Copper ( $\mu\text{g/L}$ as Cu)	17	9	<5	<5	<5	<5	9	22	52	10	12
Iron ( $\mu\text{g/L}$ as Fe)	24	7	<10	<10	<10	15	228	526	844	149	228
Lead ( $\mu\text{g/L}$ as Pb)	33	25	<2	<2	<2	<2	<2	5	122	8	22
Lithium (mg/L as Li)	4	0	0.09	--	0.09	0.09	0.1	--	0.1	0.09	0.01
Manganese ( $\mu\text{g/L}$ as Mn)	24	14	<2	<2	<2	<2	7	20	28	6	7
Nickel ( $\mu\text{g/L}$ as Ni)	15	15	<5	<5	<5	<5	<5	<5	<5	<5	0
Selenium ( $\mu\text{g/L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g/L}$ as Ag)	7	6	<2	--	<2	<2	<2	--	11	3	3
Strontium ( $\mu\text{g/L}$ as Sr)	17	0	370	395	439	470	517	559	604	477	63
Vanadium ( $\mu\text{g/L}$ as V)	13	8	<10	<10	<10	<10	12	14	22	12	3
Zinc ( $\mu\text{g/L}$ as Zn)	17	1	<5	5	8	13	30	59	689	60	163
<b>Carbon</b>											
Total organic carbon (mg/L as C)	16	12	<1	<1	<1	<1	1.09	1.63	3.24	1.2	0.57

**Table 93.--Construction information and summary statistics for water-quality data for Zamora 1**

[gal/min, gallons per minute; ft bls, feet below land surface; ft asl, feet above sea level; MDL, method detection limit;  $\mu\text{S}/\text{cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); <, less than; --, no data; mV, millivolts; mg/L, milligrams per liter;  $\mu\text{g}/\text{L}$ , micrograms per liter]

**Construction information**

Latitude: 35°09'19"	Well capacity (gal/min): 2,410	Ground elevation (ft asl): 5,168
Longitude: 106°42'51"	Cased depth (ft bls): 970	Static water level (ft bls): 233.40
Date drilled: 1992	Screened interval (ft bls): 450-950	Static water level date: 1/28/98

**Summary statistics (data from 1993 to 1997)**

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles					Maximum	Mean	Standard deviation
				10th	25th	50th (median)	75th	90th			
<b>Properties</b>											
Specific conductance, field ( $\mu\text{S}/\text{cm}$ )	49	0	290	389	408	416	421	429	577	415	37
pH, field (standard units)	49	0	7.43	7.74	7.82	7.92	7.98	8.05	8.22	7.9	0.15
pH, lab (standard units)	49	0	7.84	7.96	8.04	8.11	8.15	8.2	8.37	8.09	0.1
Eh, field (mV)	49	0	38	107	159	197	231	421	694	226	124
Temperature, field (deg C)	49	0	10.4	23.3	24	24.2	24.3	24.4	24.4	23.8	2
Hardness (mg/L as $\text{CaCO}_3$ )	49	0	62.3	63.5	65	66.3	68	70.6	76.5	66.8	2.95
Alkalinity (mg/L as $\text{CaCO}_3$ )	49	0	122	126	127	129	130	133	135	129	2.89
Langelier saturation index (standard units)	49	0	-0.52	-0.28	-0.15	-0.04	0.01	0.09	0.24	-0.07	0.16
<b>Dissolved solids and major ions</b>											
Dissolved solids (mg/L)	48	0	244	288	296	304	308	316	344	302	13.7
Calcium (mg/L as Ca)	49	0	18.1	18.4	19.4	20.3	21.4	23.3	24.6	20.5	1.72
Calcium (mg/L as $\text{CaCO}_3$ )	49	0	41.4	48.2	50.6	52.3	54	54.6	56.3	51.8	3.04
Magnesium (mg/L as Mg)	49	0	3.32	3.45	3.56	3.73	3.89	4.16	4.42	3.77	0.26
Sodium (mg/L as Na)	49	0	46.3	54.3	58	59.9	61.8	64.6	74.3	59.8	4.82
Potassium (mg/L as K)	49	0	5.89	6.52	6.83	7.18	7.42	8.02	8.76	7.19	0.56
Bicarbonate (mg/L as $\text{CaCO}_3$ )	49	0	120	124	125	126	130	132	157	128	5.14
Carbonate (mg/L as $\text{CaCO}_3$ )	49	3	<1	1.06	1.33	1.54	1.73	1.88	2.74	1.53	0.34
Sulfate (mg/L as $\text{SO}_4$ )	49	0	48.2	54	55.2	57.4	59.2	60.9	64.1	57.4	3.11
Chloride (mg/L as Cl)	49	0	5.41	8.48	8.87	9.22	9.37	9.54	9.7	9.04	0.66
Fluoride (mg/L as F)	49	0	0.68	0.7	0.73	0.78	0.82	0.89	0.93	0.79	0.07
Bromide (mg/L as Br)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
Silica (mg/L as $\text{SiO}_2$ )	49	0	55.1	63.9	67.6	70.8	73.9	79	81.2	70.8	5.67
<b>Nutrients</b>											
Nitrite (mg/L as N)	9	9	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	<0.05	0
Nitrate (mg/L as N)	47	0	0.72	0.76	0.82	0.86	0.87	0.9	0.99	0.85	0.05
Orthophosphate (mg/L as P)	9	9	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	<0.5	0
<b>Trace elements</b>											
Aluminum ( $\mu\text{g}/\text{L}$ as Al)	9	9	<40	--	<40	<40	<40	--	<40	<40	0
Antimony ( $\mu\text{g}/\text{L}$ as Sb)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Arsenic ( $\mu\text{g}/\text{L}$ as As)	49	0	10	11	14	14	15	16	17	14	2
Barium ( $\mu\text{g}/\text{L}$ as Ba)	9	0	43	--	46	54	55	--	57	51	5
Beryllium ( $\mu\text{g}/\text{L}$ as Be)	9	9	<1	--	<1	<1	<1	--	<1	<1	0
Boron ( $\mu\text{g}/\text{L}$ as B)	9	0	84	--	165	173	198	--	399	188	91
Cadmium ( $\mu\text{g}/\text{L}$ as Cd)	9	2	<0.1	--	0.1	0.1	0.1	--	0.2	0.1	0
Chromium ( $\mu\text{g}/\text{L}$ as Cr)	9	0	2	--	4	5	6	--	9	5	2
Copper ( $\mu\text{g}/\text{L}$ as Cu)	9	7	<5	--	<5	<5	<5	--	8	5	1
Iron ( $\mu\text{g}/\text{L}$ as Fe)	49	41	<10	<10	<10	<10	<10	15	112	14	16
Lead ( $\mu\text{g}/\text{L}$ as Pb)	49	49	<2	<2	<2	<2	<2	<2	<2	<2	0
Lithium (mg/L as Li)	--	--	--	--	--	--	--	--	--	--	--
Manganese ( $\mu\text{g}/\text{L}$ as Mn)	49	49	<2	<2	<2	<2	<2	<2	<2	<2	0
Nickel ( $\mu\text{g}/\text{L}$ as Ni)	9	8	<5	--	<5	<5	<5	--	6	5	0
Selenium ( $\mu\text{g}/\text{L}$ as Se)	9	9	<2	--	<2	<2	<2	--	<2	<2	0
Silver ( $\mu\text{g}/\text{L}$ as Ag)	--	--	--	--	--	--	--	--	--	--	--
Strontium ( $\mu\text{g}/\text{L}$ as Sr)	9	0	272	--	294	317	343	--	355	315	32
Vanadium ( $\mu\text{g}/\text{L}$ as V)	9	0	22	--	26	27	29	--	32	27	3
Zinc ( $\mu\text{g}/\text{L}$ as Zn)	9	6	<5	--	<5	<5	5	--	13	6	3
<b>Carbon</b>											
Total organic carbon (mg/L as C)	9	8	<1	--	<1	<1	<1	--	1.4	1.04	0.13

**Table 94.--Selected summary statistics for medians of water-quality data for all wells**

[MDL, method detection limit;  $\mu\text{S/cm}$ , microsiemens per centimeter at 25 degrees Celsius (deg C); mV, millivolts; <, less than; mg/L, milligrams per liter;  $\mu\text{g/L}$ , micrograms per liter]

Parameter	Number of samples	Number less than MDL	Minimum	Percentiles			Maximum
				10th	50th (median)	90th	
<b>Properties</b>							
Specific conductance, field ( $\mu\text{S/cm}$ )	93	0	260	315	420	570	695
pH, field (standard units)	93	0	7.34	7.56	7.77	8.59	9.00
pH, lab (standard units)	93	0	7.61	7.77	7.94	8.63	9.11
Eh, field (mV)	93	0	85	138	168	184	197
Temperature, field (deg C)	93	0	16.7	18.3	22.6	26.9	33.4
Hardness (mg/L as $\text{CaCO}_3$ )	93	0	9	27.4	114	157	229
Alkalinity (mg/L as $\text{CaCO}_3$ )	93	0	99.9	107	122	152	168
Langelier saturation index (standard units)	93	0	-0.18	-0.1	0.01	0.15	0.5
<b>Dissolved solids and major ions</b>							
Dissolved solids (mg/L)	93	0	168	204	287	368	440
Calcium (mg/L as Ca)	93	0	1.92	7.98	39.2	54.3	75.9
Calcium (mg/L as $\text{CaCO}_3$ )	93	0	8	21	99.5	135	189
Magnesium (mg/L as Mg)	93	0	0.09	1.16	4.50	8.04	13.4
Sodium (mg/L as Na)	93	0	16.9	21.8	39.1	91.9	140
Potassium (mg/L as K)	93	3	<1	1.59	2.87	7.39	9.65
Bicarbonate (mg/L as $\text{CaCO}_3$ )	93	0	99.6	106	121	146	168
Carbonate (mg/L as $\text{CaCO}_3$ )	93	53	<1	<1	<1	5.39	14
Sulfate (mg/L as $\text{SO}_4$ )	93	0	16.8	23.3	38.1	79.2	133
Chloride (mg/L as Cl)	93	0	4.79	7.97	17.5	55.8	90.2
Fluoride (mg/L as F)	93	0	0.33	0.45	0.65	1.1	1.5
Bromide (mg/L as Br)	92	92	<0.5	<0.5	<0.5	<0.5	<0.5
Silica (mg/L as $\text{SiO}_2$ )	93	0	22.7	28.7	36.2	68.8	73.2
<b>Nutrients</b>							
Nitrite (mg/L as N)	92	92	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate (mg/L as N)	92	18	<0.05	<0.05	0.30	1.68	3.38
Orthophosphate (mg/L as P)	92	92	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Trace elements</b>							
Aluminum ( $\mu\text{g/L}$ as Al)	93	93	<40	<40	<40	<40	<40
Antimony ( $\mu\text{g/L}$ as Sb)	93	93	<2	<2	<2	<2	<2
Arsenic ( $\mu\text{g/L}$ as As)	93	16	<2	<2	8	34	49
Barium ( $\mu\text{g/L}$ as Ba)	93	0	8	34	87	166	200
Beryllium ( $\mu\text{g/L}$ as Be)	92	92	<1	<1	<1	<1	<1
Boron ( $\mu\text{g/L}$ as B)	93	15	<50	<50	110	232	352
Cadmium ( $\mu\text{g/L}$ as Cd)	92	86	<0.1	<0.1	<0.1	<0.1	0.1
Chromium ( $\mu\text{g/L}$ as Cr)	92	41	<1	<1	1	6	23
Copper ( $\mu\text{g/L}$ as Cu)	93	90	<5	<5	<5	<5	9
Iron ( $\mu\text{g/L}$ as Fe)	93	58	<10	<10	<10	18	59
Lead ( $\mu\text{g/L}$ as Pb)	93	92	<2	<2	<2	<2	3
Lithium (mg/L as Li)	87	0	0.01	0.02	0.04	0.1	0.19
Manganese ( $\mu\text{g/L}$ as Mn)	93	63	<2	<2	<2	11	114
Nickel ( $\mu\text{g/L}$ as Ni)	93	93	<5	<5	<5	<5	<5
Selenium ( $\mu\text{g/L}$ as Se)	93	92	<2	<2	<2	<2	2
Silver ( $\mu\text{g/L}$ as Ag)	87	85	<2	<2	<2	<2	3
Strontium ( $\mu\text{g/L}$ as Sr)	93	0	52	97	320	504	869
Vanadium ( $\mu\text{g/L}$ as V)	93	57	<10	<10	<10	46	99
Zinc ( $\mu\text{g/L}$ as Zn)	93	53	<5	<5	<5	8	13
<b>Carbon</b>							
Total organic carbon (mg/L as C)	93	84	<1	<1	<1	<1	1.52

**Table 95. --Selected U.S. Environmental Protection Agency drinking-water standards and percentage of wells exceeding them**

[All values except pH are in milligrams per liter. --, none; <, less than; >, greater than; U.S. Environmental Protection Agency, 1998]

Parameter	<u>Maximum contaminant level</u>		<u>Secondary maximum contaminant level</u>	
	Value	Percentage of wells having median values exceeding	Value	Percentage of wells having median values exceeding
<u>Properties</u>				
pH	--	--	<6.5 or >8.5	10.8
<u>Dissolved solids and major ions</u>				
Dissolved solids	--	--	500	0
Sulfate	--	--	250	0
Chloride	--	--	250	0
Fluoride	4.0	0	2.0	0
<u>Nutrients</u>				
Nitrite (as N)	1	0	--	--
Nitrate (as N)	10	0	--	--
<u>Trace elements</u>				
Aluminum	--	--	<0.05 or >0.2	0
Antimony	0.006	0	--	--
Arsenic	0.05	0	--	--
Barium	2	0	--	--
Beryllium	0.004	0	--	--
Cadmium	0.005	0	--	--
Chromium	0.1	0	--	--
Copper	<sup>1</sup> 1.3	0	1.0	0
Iron	--	--	0.3	0
Lead	<sup>1</sup> 0.015	0	--	--
Manganese	--	--	0.05	2.2
Mercury	0.002	0	--	--
Selenium	0.05	0	--	--
Silver	--	--	0.10	0
Thallium	0.002	0	--	--
Zinc	--	--	5	0

<sup>1</sup>action level